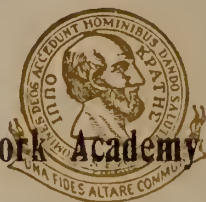


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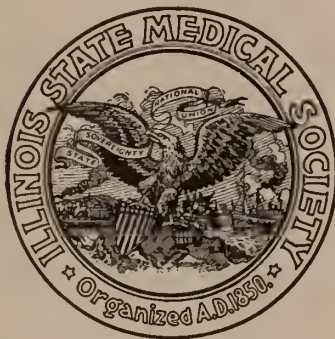
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This is an alphabetical index of articles and discussions arranged by leading words. It contains occasional cross references. Names of authors and men who discussed the papers are also included. Details of society proceedings, including the names

of papers read, officers elected, etc., can be located in the proceedings under Societies. Editorials, News of the State, Marriages, Deaths, Public Health items are classified under these headings. The subjects of editorials also appear alphabetically and are marked (E).

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Original Articles

HOSPITAL STANDARDIZATION*

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CHICAGO

Standardization of hospitals is just now engaging the attention of a number of organizations. At present no fewer than fifteen bodies of national scope are giving the subject special consideration.

The American Medical Association since 1905 has occasionally taken up the hospital question only to let it slumber again. More recently the American College of Surgeons has undertaken the task of regulating the hospitals of the country and at the present time this organization is more active than any other of the fifteen.

Not only are these numerous organizations volunteering to deal with the hospitals, but also, the legislatures of some states are attempting to regulate and standardize hospitals by law.

Hospital standardization is a subject of great and growing importance. All of the fifteen or more organizations have some natural interest in hospitals. The National League of Nursing Education, and the American Nurses' Association doubtless will not overlook matters which concern the nurses. The American Hospital Association will have in mind questions of hospital administration. The American College of Surgeons is emphasizing case histories and the preservation intact of the surgeon's fee, and so on through the list of this committee of fifteen, each seeking to attain greater efficiency in the particular lines wherein lie its greatest interests.

The medical colleges are interested in securing educational advantages for their students, while the Federation of State Medical Boards shares this viewpoint but enlarges it to include the education and training of nurses. With the composite solicitude of fifteen naturally interested

organizations, one might assume that hospital standardization is in a fair way to be properly taken care of. However, one cannot escape the feeling that something vital is lacking.

The party most concerned is being all but overlooked, and that silent unorganized party is the public—the people whose misfortune it is to be in need of hospital attention. People who become patients in a hospital do so with one object in view, namely, they wish to live and get well. The hospital that best attains this object for its patients is the best hospital and should serve as a standard for all other hospitals. As the patients are unorganized, and to a great extent uninformed, their part in hospital standardization is necessarily small, in fact, is almost limited to furnishing the statistics.

Hospital standardization is essentially a broad subject. In one way or another, at one time or another everybody is affected. Since the matter is one which vitally concerns the whole people, the representatives of the whole people, in other words, the State, theoretically might well exercise the function of supervising all matters pertaining to the health and well-being of the people. No one can find fault with this theory unless he be opposed to our form of government, yet no one familiar with the facts concerning medical legislation and the ways of politicians, cares to see the question of hospital standardization become the subject of legislative enactment. However, we are doubtless headed in that very direction.

A survey of the personnel of any or all the state legislatures will show that, by training and education, the members are incompetent to deal with health questions. If a lone physician happens to be found among the membership of a state legislature more than likely he will be found to be retired, to represent a factory, a coal mine, a packing house or something other than medical interests. It is no reflection upon the intelligence of a lawyer that he is not specially

*Read at the seventieth annual meeting of the Illinois State Medical Society at Rockford, May, 1920.

skilled in matters of sanitation. Retired bankers, nor yet saloon keepers can be expected to have first hand knowledge of health questions. The makeup of the average state legislature makes the outlook for hospital legislation very unpromising.

In what direction shall we then turn in order that hospital regulation shall be in safe hands? Who or what organization stands nearest to the public and likewise possesses the necessary knowledge of the proper mission of the hospital? Is it an organized group of hospital employees? Can this important work best be done by a group of physicians whose practice is limited to a specialty, and whose membership is only 2 or 3 per cent. of the medical profession? Rather, should this highly important task be assumed by those who are most competent, by those who are closest to the public that has need of what the hospital should stand for—by the medical profession through its one great comprehensive organization to which every reputable physician may belong, and for the most part does belong.

The coöperation of every organization having a proper interest in hospitals is to be encouraged and conversely any organization with aims or interests that are not proper, is to be discouraged. In every case the arbiter of disputes and clashing interests must be the highest and most representative authority, and this authority in hospital matters can only be the medical profession as a whole.

Whether it be logical or not that regulation of health matters be delegated to the several states, such is the fact. Under conditions as they now exist one may be a physician in Illinois and a layman in every other state of the Union. It matters not that this is the acme of inconsistency, we must face facts as they are and govern ourselves accordingly. If the regulation of hospitals is a prerogative of the states, then the state medical societies must become active. If there is to be an attempt by the states to standardize hospitals—and Ohio has already such a law—then it is the duty of the state medical societies to become active in formulating the standards, and if there be no legislative or administrative attempt to standardize hospital practice, there is still an imperative duty to perform this work which the state medical societies must not shirk. One more attack of the *sleeping sickness* on the question of hospital standardization

will see this matter slip into less qualified hands; and the same deplorable confusion will ensue which now characterizes the medical practice acts of the different states.

At the New Orleans session of the American Medical Association, upon recommendation of the Board of Trustees, the House of Delegates changed the name of the Council on Medical Education to the Council on Medical Education and Hospitals, and the term “standardized hospitals” to “approved hospitals.” Medical education and hospitals are inseparable; but to look upon hospitals primarily as an essential adjunct to medical education is putting the cart before the horse. From the hospital standpoint the one important mission is the care of the sick. Providing teaching clinics for medical students, training interns and nurses in the art of alleviating human suffering and facilitating medical research are highly important functions of the hospital, but it is possible for a hospital to attain to the highest degree of characteristic excellence without emphasizing any of these secondary functions.

Counting hospitals, sanitarium, asylums, state and private institutions of all kinds, there are in Illinois upward of 380 hospitals. Less than 20 per cent of this number have interns. Only about 25 per cent have training schools for nurses that meet the requirements of the Department of Registration and Education. The State Medical Society through its component county medical societies is competent to inspect all the hospitals within the state. It can complete the survey promptly. Reinspection and additional reports can be carried on with a minimum of effort and a maximum of efficiency and reliability.

A basis of approval, thoughtfully considered and judiciously determined by the accredited representatives of the whole medical profession, standing as it does as the “next friend” of the public, is bound to merit the respect of whatever public official may now or hereafter be clothed with the authority, or charged with the duty of approving hospitals. While the decisions and conclusions of the physicians cannot have any binding effect upon the hospitals, the collective opinion of the medical profession judiciously and forcefully set forth, can have a very great influence in shaping the regulations which are to apply to hospitals.

As one of the foremost states in the number of its hospitals, Illinois must be prepared to do its share in guiding the momentous hospital question to a fortunate solution. The State Medical Society must have its permanent hospital committee. The hospitals of this commonwealth must be encouraged and assisted in rendering the best possible service to the public. The hospitals must not be permitted to become the instrument for selfish purposes of any medical oligarchy, whether it be a hospital staff or a larger group of specialists with some misleading name. Hospitals are among our most valuable and effective means of defense against that army of ills which seeks to maim and destroy human life. Whatever we can do to make hospitals more efficient is sure to merit the approval of a grateful public.

DISCUSSION

MR. F. W. SHEPARDSON: I appear before you as an administrator to urge upon you the great importance of following the suggestions just made to you by Dr. Humiston. The State of Illinois, largely because of the efforts of the Illinois State Medical Society, has a Medical Practice Act which requires that all graduates from medical schools on and after 1921 shall have had one year of internship in an approved hospital before they can be admitted to practice in the medical profession. These men and women are now in the medical schools.

The Medical Practice Act states that those hospitals for interns shall be approved by the Department of Registration and Education, and the Director of Registration and Education must, therefore, in the immediate future face the problem of preparing an approved list of hospitals.

Dr. Humiston has suggested the various forces which are at work upon this problem. I agree with him absolutely that the physicians of Illinois must set a standard for the hospitals they wish approved. The officers of the department, by the terms of the law, are laymen. They cannot approach this from the medical standpoint at all. They are simply charged with administering the law.

Now, in examining the hospitals in the United States, we find that the great majority of them do not have interns, and therefore, it looks as though the number of hospitals which will be available for the purposes of the Medical Practice Act will be relatively small, unless such interest is aroused in the matter by you and bodies like you that other hospitals not now prepared to accept interns must get ready for that job.

I take it that of those three things that Dr. Humiston

has mentioned, the care and cure of the sick, medical research and the educational side, the training of interns and nurses, the educational side, is the only one which directly at the present time affects the Department of Registration and Education. On the intern question, we must act immediately, and I urge you to accept the suggestions of Dr. Humiston to appoint a committee to take up this most important matter and let the Department of Registration and Education know what it is you want to be demanded of a hospital that shall train interns.

I take it that that hospital must be sufficiently large and have sufficient equipment to provide the proper instruction for the interns, because evidently from the terms of the Medical Practice Act this is a matter of education. It must have people on the staff who will be willing and able to teach those interns. It must have proper laboratories for the instruction of the interns. It must have proper facilities for housing the interns. It must enter heartily into this new scheme to give the man who is going to become a practitioner in Illinois the best type of education possible.

I know that there is discontent in Illinois relative to the attitude of the Department of Registration and Education toward the hospitals so far as they relate to the nursing school. That, again, is a matter of education. There has been some doubt, there are several different points of view—I confess to you that I don't know the right point of view to take. My duty is to enforce the law. I believe that of the three types of hospitals now standing out conspicuously, namely, the great, big, endowed hospital on the one side, the private hospital run principally for the benefit, direct or indirect of a given physician or group of physicians, and then the third, the hospital which is growing up in the smaller towns and cities of Illinois, the pride of the community, the place to which all the thoughts of the people turn—of the three, it seems to me that standard must lie along the lines of the smaller hospital in the smaller community, and then by real competition, there will be an improvement of the other hospitals, until starting with the minimum standard, starting with a standard which those who are honestly and earnestly endeavoring to do the right thing can't meet, we can go forward, as this thing develops, to something better.

But, gentlemen, as Dr. Humiston has said, something must be done and must be done right away, because this is 1920, and the boys who must have the benefit of this Medical Practice Act are now in the medical school, and before the close of the year 1921 the Department of Registration and Education of the State of Illinois must have a list of approved hospitals in which interns can be trained, and we can't have that approved list and the right kind of a list unless we have the hearty and sympathetic cooperation of every member of this great organization.

PROBLEMS IN SOCIAL HYGIENE.*

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CHICAGO

Gentlemen, it is a great pleasure for me to come before you and attempt in my poor way to fill the place of my Chief, the Surgeon General. I am willing to do my best, however, and if you will bear with me a little while I am going to try to tell you some of the problems in social hygiene that we are facing today in this Government of ours.

At the beginning of the war, as most of you gentlemen know, the United States Government faced a tremendous problem, the problem of handling what promised to be a very, very large army. We did not know just exactly what we were up against. We rather were novices in the establishing of an army.

You heard Dr. Vaughan tell you this morning of the number of difficulties that we had to face in gathering men together and of the hundreds of infectious diseases that were contracted that might have been eliminated or might not have been contracted had we had proper methods for gathering men together in communities and in the counties from which they came. However, in view of the difficulties that we had to encounter, we did very good work. Men were gathered together, and shortly, almost within an unbelievable time, we had 2,000,000 men. 3,000,000 men and then 4,000,000 under arms—4,000,000 men representing the different families from all over the United States, representing the different homes—men from your county, your county seat, your own city. Men were called to arms from every place, and no profession responded more nobly than did the medical profession. They rose to a man almost and volunteered their services and they did yeomen service. The problem arose, after the soldiers were in camp—what were we going to do with them? Were we to turn them loose as had been done in previous wars? Were these men to be permitted to parade the streets after they had gotten through with their drills and after the evening mess period was over? Were they to be turned loose to run wild as they did in the Spanish-American War and in previous wars? Were we to throw

safeguards around them? Was the old established order which taught license to be abandoned and the new order which was to conserve the manhood of America to be brought into play?

A great conference was called. Men who had spent most of their lives in training young men in the science of proper living, men who had given an immense amount of time to studying the problems that involved the welfare of society, were called together, and a revolutionary policy was adopted. It was decided in this meeting that young men in camps were to receive a type of protection that they have never received at home. Cordons were thrown around camps; houses of prostitution within a radius of five miles were closed; saloons were closed and no soldier was permitted to take a drink and no saloon keeper or hotel man or club was allowed to serve a soldier an alcoholic beverage under penalty of fine or imprisonment. These things did wonders, and with the assistance of the Y. M. C. A., the Y. W. C. A. and the Knights of Columbus, young men were protected in the camps. These associations I have mentioned, built homes and places for young men to go to, places where stationery was furnished, where amusement was given, where moving pictures were thrown on the screen, and incidentally these same institutions provided certain educational opportunities whereby young men might learn, and, as a consequence, never before in the history of an army was there so little loafing after drill hours as was in the last army.

My address would be incomplete if I were to fail to mention the good work performed by the Y. W. C. A. They did magnificent work, but when they built their Y. W. C. A. club houses and opened their cafeterias and made their clubs places of rendezvous where soldiers might meet their sweethearts, where mothers might see their sons, and wives might see their husbands, they did something that was one of the biggest things done during the war; we owe a great debt of gratitude to the Y. W. C. A.

Better than all, the greatest thing done by this conference of men was when they advocated the instruction of every young man who went into the service as to how he should protect himself. It was amazing, gentlemen, to note the ignorance, the pathetic ignorance, of men who came into the army from civil life as to the processes of birth. They understood absolutely

*Delivered before Tri-State District Medical Society, Rockford, Sept. 2, 1919.

nothing about it. They knew practically nothing of venereal diseases except to refer to a case of gonorrhea as being nothing more than a bad cold and to a case of syphilis in this fashion, "Oh, if I get it I'll go over here to the Doc and he'll give me a shot of 606 and that will fix me up and I'll get well." They did not realize that they were dealing with racial poisons that would sap their very vitals. They were ignorant; they had been sent away from home hopelessly ignorant of all the things they should have known.

In all the lecture work I did in these camps, in talking to over a million young men in the different cantonments, following nearly every lecture that I gave I had officers and men come to me and ask, "Why in God's name didn't our mothers and fathers tell us the things that you have told us when we were young boys?" They also said, "If they had told us, we would have been saved from many a false step."

The greatest amount of good has been done, and as a result of the training that these young men received in the United States Army it is the proud boast of the army that never since warfare began has there ever been such an aggregation of clean men gathered together as were among the four million men under arms.

We had 227,000 cases of venereal diseases in the service up to February, 1919, which we can directly charge as having been brought from civil life, to the shame of the communities wherein these diseases were contracted. Five-sixths of all the venereal disease that was carried into the army, less than 38,000 cases or a little more, were contracted by men after they put on their uniforms. A man who contracted a venereal disease after he put on his uniform was viewed as a slacker. He was put into a pen; he was court-martialed and he was made to feel that, in a way, he had committed a heinous crime or a sin, for he had deliberately, in the face of instruction, in the face of training, in the face of issues involved, jeopardized his career, jeopardized his possible chance to become a good fighting man.

The problem we are facing today, my friends, is exactly the same problem that the United States Government faced during the war. The United States Public Health Service is providing means whereby the State Boards of Health can carry on a venereal disease control campaign

through an appropriation given them by a bill known as the Chamberlin-Kahn Bill.

This appropriation gives to the states a certain fund that the state legislatures in turn duplicate, and the money gotten in this way is used for the purpose of carrying on venereal disease control work and for education. We must educate. There isn't any problem as great before us as the problem of venereal disease control, the question of handling it, the question of controlling the hidden menace of society, the diseases of gonorrhea and syphilis that are sapping at the vitals of practically every young man in America. It is estimated that 770,000 men reach the age of twenty-one every year in the United States. Of these 770,000 a conservative estimate puts over 450,000 of them, or 60 per cent., as contracting gonorrhea or syphilis before they reach the age of thirty. Isn't the problem a big one? Isn't the problem a big one when 60 per cent. of your young men contract a venereal disease before they reach the age of thirty? Isn't the problem big enough for the medical profession to wade into and say we are going to clean it up? We have been facing for too many years these hidden diseases. They haven't been brought into the light of day. We have been allowing the venereal diseases to steal out in the dark and stab our young manhood in the back and then run away—all this because of that damnable curse of society—mock modesty—this curse has taught us to hide behind our hands and blush at the mention of the holiest of all functions in nature, the reproductive function, and has taught us to blush and say, "Oh, we must not talk about that; we must not say anything at all about it; I tell my child? Oh, no, no, no! It is wrong to speak of it."

We have allowed that child to develop without knowledge of itself and to go directly into the muck and contract diseases that it should have been guarded against. We have got to bring venereal diseases into the light of pitiless publicity just as we brought tuberculosis and other diseases to light that were once repugnant.

We must urge not alone careful treatment, but we must urge in the majority of instances a type of quarantine that will safeguard the balance of the community. Quarantine to the average medical man is a bugbear as far as venereal diseases are concerned. I know that. It shouldn't

be, because the vast majority of your cases of venereal diseases will take treatment provided you are careful in explaining the dangers of the disease. Too many men view gonorrhea, as I said before, as nothing more than a bad cold, and they imagine it can be readily cured, when we as medical men, know that there isn't a disease on the face of God's green earth that is as hard to eliminate from the system as is gonorrhea. How many times in your practice can you think of when cases came to you of diseases which you could directly trace primarily to a gonorrheal infection? How many cases of endocarditis, how many cases of arthritis can you trace directly to gonorrheal infection?

The saddest picture of all is that picture on the other side that involves the female. So many of us are continually saying that the young man must sow his wild oats; so many of us are urging that before he marries he must go out and paint the town, go to a house of prostitution, associate with prostitutes and have a real good time. The medical profession is not urging this today; it is frowning upon it, but in many instances men are made to believe that continence itself is impossible and others are made to believe that the exercise of their sexual functions is necessary to their health, and they are told that unless they do associate with prostitutes they cannot throw their shoulders back and strut up and down the street and boast full manhood; that they must test their virility on a prostitute. Whenever a young man starts sowing his crop of wild oats, he must reckon on a harvest day coming, and that harvest usually comes and is reaped with the flail of agony, of pain and of disaster not alone, as you gentlemen know, to the man but to his wife and to his progeny. They are the ones who usually pay the penalty.

There are conditions involving the female pelvis which are due entirely to the fact that the wife is reaping the harvest of wild oats that her husband sowed in his young manhood. Think of the number of blind babies who become so as a result of uncured gonorrhea. Some say that we haven't a big enough problem, that we are not ready to take hold of this.

Look at the thousands and thousands of wrecks that one sees from syphilis. The other day in one certain city, inside of twenty minutes, I saw a case of locomotor ataxia, a case of hemi-

plegia, and a case of blindness, all produced by syphilis.

Some time ago, in Indianapolis, a little boy ten years old walked into the State Board of Health and called attention to a condition in his nose. He said that he had a bad case of "sniffles." He said, "Doctor, a few days ago I felt something loose up in my nose and I took a hairpin and pulled it out." He had pulled out the bony structure. He had inherited the crop of wild oats that his father had sown. Many of us are asking ourselves that age old question (this is especially true among the laity): "Am I my brother's keeper?" You are responsible for your brother's actions as you have never been before. You are more responsible for your brother than ever before because out of this war has been born a new type of brotherhood, a new type of man.

When your boys and men went across to France, when they went into the front line, the question of caste, the question of wealth, the question of social position, was forgotten and the only thing that counted in France and counted in America during the war was man's ability to deliver the goods, and the man who delivered the goods in this war was the man who was free from venereal diseases. Each and every man became the other man's brother and his keeper. He realized the necessity of looking after the welfare of the other fellow. The day has long since passed when we can view the sick man in a community as an individual unit. When one man in society is sick, he is taking the chance of making others ill. Therefore, we have got to come to the principles of preventive medicine. You know this as I know it. We see the needs for preventive medicine everywhere that we go. We have got to carry our methods further. We have to prevent venereal disease through education. We must drive it out. How are we going to do it? Primarily by treatment; and by the establishment of clinics wherein men who cannot afford to take and pay for treatment at the hands of specialists may receive it free. Such clinics are being established by State Boards of Health and by the United States Government. Then comes quarantine, building detention hospitals for the purpose of taking care of men and women who are infected and who will not submit to treatment unless they are forced to it. One other method is that of education of the medical profes-

sion, education of medical men in their own private practice to take care of every case of venereal disease that comes under their observation and see that their cases are treated properly. I know that the majority do see now that their cases are treated properly, but we must go a step further and take a little more pains with the individual; we must report the disease by name.

Many of you argue that it is not necessary to report venereal diseases. It is just as necessary to report venereal diseases as it is to report smallpox or diphtheria and conditions of a kind which are a menace to public welfare. In venereal diseases the individual infected desires to keep the fact in the dark. Venereal diseases are race poisons, and you must bring them into the light of day in order to cure them.

We must start at the beginning with our children and educate them. I am not, at the present time, fully convinced in my own mind, after having talked to probably 2,000,000 individuals on this subject, that we are ready for education in the public schools. I don't believe that we are quite ready to go into the schools and teach social and sex hygiene.

The first thing that we must do is to educate a generation of parents in order to familiarize them with the details of social and sex hygiene and of the processes of reproduction in order that they can answer questions sensibly when their children ask them.

I have heard some of the most atrocious things told by some of the most highly regarded teachers of social and sex hygiene to children. I recall one specific instance in a well known city that put on a purity campaign. They said that every school had to have lectures and so on. They picked up a few individuals who had probably read some of the softer stuff and sent them out. They had not grasped the great, big theme; they had not seen with the broad vision. One little girl went home after hearing one of these lectures. She went up to her mother and said, "Mother, why is it that a woman who is pregnant cannot ride in an automobile?" Her mother said, "What do you mean?"

"That is what the lecturer on social hygiene told us today." That is the conception that so many individuals have of the problem. Therefore, I say that we must educate a generation of parents before we can hope to establish a

system in the schools whereby we can teach social and sex hygiene.

We come down to the question of prostitution and the regulation of it. A great deal has been said both for and against regulation of prostitutes. The army proved conclusively that the existence of regulated districts was not necessary. However, clandestine prostitutes have been scattered broadcast, and a great many are puzzling their brains today over whether or not segregation is the proper thing.

I don't think it is the proper thing, but I do think that until we can educate the mass of the public to believe in a single standard of morals, something will have to be done. We must say to the young man and the young woman, "You have to live on a clean plane." To the young man who expects of the woman chastity and purity, we must say that unless he leads as chaste and pure a life as the woman he expects to marry, that he will be thrown out—not literally thrown out but that he will become a diseased individual, and as a diseased individual he will become a Pariah. No man living has the right to demand of a woman chastity unless he is ready and willing to give chastity in return—a very bold, very broad and very big statement, a statement which I am perfectly willing to back up. You have no right to make prostitutes to gratify the lustful appetites of males. Prostitution is a man-made institution. Prostitution is not made by females. In no animal do you find any semblance of prostitution. The human family is the only one wherein the lustful appetites of males must be gratified by poor females who are forced into a trade that in the majority of instances is repugnant to them.

You are familiar, of course, with some of the regulations regarding the interstate travel of infected individuals. Men and women are forbidden to travel from one state to another when they are infected with venereal diseases.

Getting back to the prostitute just a moment; we must establish in all cities a place where prostitutes may be examined and treated. As long as we have them they must be examined, but at the same time that a prostitute is arrested her male consort should be arrested with her and examined in the same way and treatment administered. There is no necessity in arresting a woman and locking her up when the car-

rier is still running loose in society. It would be a good idea if every man in the medical profession would take enough interest in the question of venereal diseases and the control of venereal diseases to see that his Congressmen and Senators are fully fortified with enough information to urge appropriations that would give more money to the treatment of these racial scourges.

We have every year all over the United States, State Fairs. In this state there is a State Fair shortly to come off. In Wisconsin, in Indiana, and elsewhere over the country where, cattle with long pedigrees, cattle of good breeding are raised, you can trace their pedigrees back for generations and generations of dams and sires. How many individuals can go back as far as three or four generations?

We are paying too little attention to the finer things that go to make better offsprings. This whole problem of venereal disease control involves the question of child welfare. We must control venereal diseases. We must drive them out so that the next generation, that generation upon whom will fall your mantle, can take up your work where you left off and know that you have done your full duty and that your children will be able to do their full duty following you.

We should instruct children in such a manner, our girls particularly, that they may grow to an age of maturity in such chastity that when their hands are asked in marriage they can turn and say, "Are you fit? Are you clean? Have you in your body germs that could cause suffering to me and could bring the degradation of an inherited malady on my baby?"

There should not be any fear or feeling of squeamishness on the part of a woman to ask a question of that kind. It should be perfectly natural. She is entering into a contract for life, a contract that in most instances means life in prison. She has to bear children, and it is her right that she should be given the opportunity herited malady on my baby?"

We must pass marriage laws that will look toward the examination of the male and the female. You may say to me, "Oh, but we have eugenic laws and they are failures." Why are they failures? Because you have not aroused the public conscience to enforce them. The very minute you do this, at that minute will you have the co-operation of all parties concerned. You must have an aroused public conscience.

The United States Government is distributing free preparations of the products of arsenic through State Boards of Health to physicians and clinics who are willing to administer it to charity cases without a charge, thereby reducing in a measure the cost to the patient. Doctors have always been philanthropists, but they are being called upon today to deal a little more in philanthropy. I believe they are going to answer the call. Your Government is asking you to do this as an after-war measure. Every man responded during the war. Don't let us fail to respond now; don't let us allow our enthusiasm to subside. We should go on and drive and drive until we can drive out this scourge of the race, this hidden menace.

When you figure the cost of venereal diseases to society, you find that it is estimated that the venereal diseases cause an economic loss of around \$5,000,000,000 a year. If the average employer would take the trouble to employ a good doctor to examine every one of his employes and to instruct that doctor that in the event an individual was found to be suffering from a venereal disease he should not be discharged, but treated as he would be if he had some other trouble, the efficiency of their men would be raised from fifty to seventy-five per cent.

As you know, no individual suffering with a venereal disease is competent to properly perform his work. He is worried over his condition. He does not feel that he is doing his work properly. It is to the advantage of the employers of labor to look after the interests of their men.

Every one of us should be interested in this problem. We must talk about controlling venereal diseases and get it before the public mind. We must keep talking about it until something is done. Your Government has made up its mind that a campaign against venereal diseases is going to be kept up and that regardless of what may happen, regardless of failure at times to get appropriations, there will be enough good men in the country, men with big enough pocket-books and broad enough minds to continue the work of education.

I want you to go back to your communities and begin talking education, education, education. Talk education of the children, talk education of the parents, and then urge the parents to educate the children. If you do that, you will have done a great deal to eliminate, in a very

large measure, the chance of these children contracting the diseases that you know are so deadly to society.

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BLOOD PRESSURE CONDITIONS AS
STUDIED BY A GENERAL
PRACTITIONER

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I have selected this subject not because of the ease of interpretation, or because I feel at all competent to present so important a theme, but because I feel there is no condition or disease more prevalent or serious at the present time, with which we have to deal, and I might add, one so little studied or understood by physicians in general. Trusting I may be able to present something of value on this and its associated conditions I have prepared this paper.

I shall consider, first, the increasing frequency of the diseases or conditions responsible for them. Secondly, I wish to consider the unnecessary habits and neglect of certain conditions that are predisposing the present generation to them. And, lastly I shall conclude with a few observations touching their general treatment by those who have most been giving this disease the attention it should demand, however much or little relief such treatment may afford.

As to the first there is no question but that structural changes in the cardio-vascular-renal organs, as well as other important vital organs, are decidedly on the increase. These changes, being excited by the same causes or conditions, if not on the increase, have led us to a more careful study of the cardio-vascular-renal system, and to better interpret our findings. Where, formerly, we were content with a diagnosis of a neurosis or neurasthenia, with the usual result that these sufferers looked elsewhere for medical relief, we now, having made a more careful study and examination of these cases, have retained their goodwill and patronage.

It is generally conceded that blood vessel changes, as well as destructive changes of other vital organs, are on the increase. The present, more than any previous generation, is paying the

penalty of high living; that is, eating too much and the wrong kinds of food. In our cities and larger towns prevailing conditions seem to require our business men to lunch at clubs, or leading hotels. The dinner at home, late in the day, proves seductive and the result, two hearty meals consisting of heavy proteids and the usual accessories. Is it strange at all that such habits, combined with lack of physical exercise, should sap their strength, destroy their vital tissues, irritate their arteries, developing a hypertension, later, possibly, arteriosclerosis, with resultant high blood pressure, subjecting the kidneys and other vital organs to overwork and destructive changes?

My observations have led me to believe that women are less subject to these conditions than men, because of the greater moderation in their habits as regards the kinds and amounts of food they consume. A few, however, of this sex forget themselves and are then penalized as well as the men. In my own community conditions exist which justify me in these beliefs. Among my business associates ten men of middle age die, to three of their companions. There must be some good reason for this discrepancy. We sometimes assume that men have less resistance than women, due to over-work, when more often it is lack of resistance due to over-indulgence of appetite or vicious habits.

A few of the more wise among the laity are learning that blood vessels and blood pressure conditions are worthy of consideration, and that a penalty must be paid for violation of certain rules in the care of their bodies. But herein lies a difficulty which confronts the doctor, in that he does not see these patients until they have developed distinctive symptoms of a disturbing nature, indicating, perhaps a cardiovascular disturbance. In most of such cases structural changes have taken place, leaving the patient with a fixed condition, and permanently high blood pressure. Unfortunately there being no early subjective symptoms to warn these victims of their cardio-vascular-renal changes the most of them seek us too late. They have probably developed many of the symptoms, to which they have become subject, before reaching us. Headache, dizziness, shortness of breath on exertion, night-terrors, inability to sleep, angina, nervousness, cold hands and feet, easily made tired, lack of power of concentration, and of interest in one's

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business affairs, etc., are some of the common symptoms. To our patients these symptoms may mean much or little. By careful examination and taking repeated blood pressure readings we are likely to find serious circulatory disturbance, with marked changes in the blood pressure. Norris¹ in his treatise on the subject, gives a systolic pressure finding constantly above 160 mm. Hg. or a diastolic pressure constantly above mm. Hg. as definitely pathological at any age. In cases which seek our aid we will find variations in pressure ranging from 160 to 240 mm. systolic, and 60 to 120 mm. diastolic. With these findings we will, also, many times find a pulse pressure of serious significance. Indeed it is only by watching such cases very closely, and by repeated blood pressure readings that we are able to determine at all the seriousness of the condition. Experience has taught me that eight out of ten of these cases will continue with a fixed, permanently high blood pressure, recognizing it as a fact that a few people can carry a high blood pressure for a long time without feeling bad effects.

The view that peripheral arteriosclerosis and cardiac hypertrophy are secondary to hypertension is constantly receiving corroboration. This being true what are the conditions present that are producing the hypertension? I believe it is generally conceded that conditions of hypertension are excited by *toxines from the alimentary canal* or from toxic substances from a *focus of infection somewhere in the body*, continuously circulating through the blood vessels, constantly irritating their delicate structures, resulting in a hypertension, later developing an arteriosclerosis, or a cardio-vascular-renal disease, and as well, destructive changes in other vital organs. More often, however, as I have already remarked, this condition of hypertension is excited by toxins from the bowels. We can demonstrate that a great many of these are absorbing toxins from their bowels by making repeated urinary examinations which will disclose the presence of large amounts of amino-acids, indol, or indican. These facts with the added personal history we obtain, admitting the eating heartily of proteids have convinced me that gastro-intestinal putrefaction with absorption of toxins are a large factor in helping bring on the ever increasing cardio-vascular-renal changes, and disturbed blood pressure findings.

That the conditions of the kidneys has much to do with high blood pressure has been well shown by Janeway². By being able to follow many of his cases to autopsy he was able to show that irritation excited by toxic substances was the same as that which affected the blood vessels as most cases of generalized arteriosclerosis without kidney involvement are unassociated with high pressure.

Faught³ declares that this change in the arteries is largely a protective effort on the part of nature to strengthen the artery in order to withstand the added strain, and, that in order to overcome the resistance offered by the hypertension the heart hypertrophies, while disturbances in renal circulation interfere with proper elimination, thus throwing additional irritating substances into the circulation, thereby establishing a vicious circle. This condition gradually increases as the pressure mounts higher and higher, unless relieved by a break at some point.

Cabot⁴ declares that "any case with a fixed blood pressure of 188 mm. Hg. systolic or more, must have an associated kidney lesion. Also he states that a continuous headache in arteriosclerosis with high blood pressure means kidney involvement." I believe a clinical and laboratory study of such cases will clearly establish these declarations.

Border line readings, such as 150 mm. Hg. systolic, for instance, are rare. This would seem to imply that there are no disturbances of function, or symptoms, to bring a patient to his physicians until hypertension has reached a noticeable point. Just how long it may take to convert a normal blood pressure into an elevated one in a case of nephritis, or arteriosclerosis we have no means of knowing. It is likely at times to be startlingly brief.

Why is this condition more commonly found among individuals who eat too much, or excessively of the wrong kinds of food? Or why is it found among stout or fat people more often than among those who eat more moderately and abstain from using tobacco and alcoholic liquors?

Though alcohol and tobacco, in my judgment, play an important part in exciting these conditions, they are a great source of irritation after the condition is once established. It is commonly understood that the reason why different individuals develop these pathologic changes is that they

are constantly taking into their bodies more fuel than it can normally consume, and the resultant waste which they are constantly absorbing and the toxins circulating in the blood stream as a means of pollution unite in irritating the blood vessels and other vital organs.

It must be kept in mind, of course, that there are those who eat normally, whose habits of life are good in every respect, who, nevertheless are unable to assimilate a normal amount and kind of food and develop these same conditions. There are still others who develop cardio-vascular-renal changes from focus of infection, or from glandular secretions abnormal in kind and amount circulating through the blood streams.

How may we know that so many of our patients of this first class, at least, overeat, except we learn it in taking their histories, and, more accurately from our laboratory findings? During the past five years I have made it a routine practice to make urinary examinations of these and other cases for indican, finding that these cases as a rule, unless directed as to their diet, will almost invariably show an excess of indican. Regulation of the diet, if such excess is shown, will usually quickly clear it up. Different writers tell us that indicanuria will be found present in certain chronic diseases. If this is true it is probable that the disorders under discussion interfere with digestion and assimilation of food.

Doctor Harold W. Dana, of Boston, who was in charge of examinations of cardio-vascular and pulmonary organs, at Camp Greenleaf, Georgia, during the late war, in a recent article⁵ makes the broad statement that high systolic blood pressure readings do not mean what they once meant. He declares, further, that repeated systolic readings of 200 mm. Hg., may have little significance, and that we are all wrong about the value of blood pressure readings. Just at the present time I find myself quite unable to agree with him. From my clinical experience, including quite a number of typical cases of the class under discussion, I am convinced the cases he speaks of so lightly, if not treated promptly and correctly, will soon develop symptoms which it may prove impossible to help. There may be exceptional cases in these classes, as in others, but they should, in my judgment, be considered exceptional purely. Then, too, the examination of men for army life who consider themselves as physically fit is quite unlike examining civilians who enter one's of-

fice seeking relief from symptoms due to blood pressure changes, or high blood pressure.

I doubt but little, if we were to examine all adults in any given community, we would find many unsuspected cases of high blood pressure, the knowledge of which would give us a great advantage along the line of prophylactic treatment.

I believe that it is generally conceded that hypertension of increased systolic blood pressure indicates the presence in the circulating blood of unexcreted putrefactive products absorbed from the intestines and the kidneys, or from foci of infection about the teeth, the nasal sinuses, gall-bladder, tonsils, genito-urinary tract, or secretions of abnormal amount or consistency from the ductless glands. If this be admitted why should not a high blood pressure reading be of as much importance in one individual as another, when the cause is conceded to be a pathological one?

With reference to the meaning and significance of the diastolic and pulse pressure I have said but little. Normally it is contended that the 3-2-1 ratio must be maintained. Taking the average readings of a large number of normal individuals this ratio, I believe will be quite evenly maintained.

Much attention at the present time is being given to the reading of pulse-pressure. Norris⁶ declares a pulse pressure persistently as low as 20 mm. Hg. or as high as 60 mm. Hg., is definitely pathological, so low a pressure not being sufficient to force the blood through the vessels and force it back to the right side of the heart.

Louis M. Warfield, in a recent article⁷ declares that a pulse pressure of 100 mm. Hg. or over is compatible not only with health, but also with considerable bodily and mental vigor. However, it must seem obvious that in such cases the circulatory system must be subjected to a greatly increased strain.

It is well known that a high pulse pressure is encountered in aortic insufficiency, chronic nephritis, arteriosclerosis, exophthalmic goiter, and many vasomotor crises. A low pulse pressure will be found in asthmatic conditions, whenever the ventricular systole is unable to meet the demands upon the left heart, in failing compensation mitral or aortic obstruction, shock, anemia, haemorrhage and cachexias—in a word pulse pressure changes are confined, practically speak-

ing, to conditions of the heart where heart changes are secondary to some pathological condition elsewhere in the body.

Summing up, briefly, I would recommend blood pressure readings as a routine practice in our every day work, and to be placed on a parity with laboratory work. In all chronic cases of obscure nature it is of major importance. It will not only frequently give a clue to an unnoticed cardiovascular-renal derangement, but will aid in the development of a diagnosis. It will also often give us strong hints toward helpful treatment.

Just a few words as to treatment and I will have finished. My experience in treating this disease has been rather unsatisfactory. First, because of the fact that the majority of these patients do not seek the advice of a physician until they have developed distinctive symptoms, and in a majority of cases definite pathological changes with a fixed high blood pressure. Second, because of the difficulty of getting patients to abandon their old time habits, and to live a restricted, regulated life. Third, because we have no specific remedy for the disease, and the best we can hope to do is to treat our patients symptomatically giving them only temporary relief.

Our treatment should be so far as possible prophylactic. We should as physicians be in position to advise the laity as to the serious consequences of over-indulgence in every respect. As to the harm of eating too much and of the wrong kind of food, we should advise young and middle-aged men and women of the importance of repeated physical examinations. At least as often as once or twice a year. It is gratifying to know that many business men are alive to the importance of taking advantage of this advice. It is only in the event of such a course accepted and followed that we are able at times to discover border-line cases and give them timely advice. As a rule, these cases come to us with well-fixed and permanent blood pressure changes and the best we can do is to give temporary relief.

The first and most important fact in our treatment is diet, directing eating less food and being careful of its kind. These patients should eat little or no proteid food, cutting down the total amount of food to two-thirds or one-half the amount they had been using formerly. They should deny themselves tea, coffee and alcoholic liquors entirely and reduce their tobacco ration.

They should drink moderately freely of water, preferably mineral water. I am accustomed to advise those who lack good elimination to use Colfax water freely with appreciably beneficial effect. Having directed a strictly routine mode of living as regards food, drink, sleep, work and exercise, and even as to their business affairs, I feel I have done my part and that the patient himself is the only one who can do his.

As regards medicinal treatment I feel about these cases much as I do about many others, that everything under the sun from the days of Galen and Hippocrates has been tried. Many times it has been my belief that they might do better if we administered no remedies at all. The most prominent among the remedies commonly used probably is the nitrite group, sodium nitrite, amyl nitrite and nitroglycerine being the most frequently used. Others in this group, however, are frequently of real service. The depressing effect upon blood pressure of this group is often magical but of short duration.

The drugs which I have found of most value in my own practice in relieving the symptoms are aconite and the iodides and occasionally digitalis and mercury. The official tincture of aconite of the Pharmacopeia of 1890, should be prescribed in the ten-drop doses four times a day, as recommended by Doctor Thompson⁸ in "Clinical Medicine." Aconite not only lowers the blood pressure through relieving the tension of the arteries, but gives relief through the increased elimination of uræa.

I have used this drug as a routine treatment in this class of cases with very gratifying results. In many cases I secure added relief by giving the iodides in five-grain doses. We are reminded that it is when our blood vessel changes are due to syphilis that the iodides are indicated, but have found it to be a very effective remedy as a routine treatment in this class of cases, a great many of these patients getting marked relief from taking iodides alone.

To illustrate the effectiveness of aconite as a drug of value in these cases I will submit, in conclusion, a case from my own practice which will illustrate the point I have tried to make touching this drug:

Mrs. R., aged 55 years, with a systolic blood-pressure of 240 m.m. Hg., has severe continuous headache, severe pressure, with a feeling that the top of her head is coming off, as she expressed it, dizziness,

inability to sleep, and an extremely weak and "tired-out" feeling. All the foregoing symptoms were speedily and satisfactorily removed by aconite and the iodides combined. Later, wishing to learn which of the drugs might be proving the better, I administered them separately with uncertain results as to the iodides but certain when using the aconite alone. While in my experience aconite does not cause any great lowering of blood-pressure in m. m. Hg. it does through its effect on the blood vessels and kidneys give these patients the needed relief.

Complications, or associated conditions, in these cases which develop with disturbances of the cardio-vascular-renal structures should receive their needed symptomatic treatment. I might add that in my opinion the old adage that "a man is as old as his arteries," still holds good, and that disease of the cardio-vascular-renal system and the reading of blood pressure by the sphygmomanometer are not receiving the attention they deserve.

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TAKING CARE OF THE STUDENT'S HEALTH AT THE UNIVERSITY OF ILLINOIS

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Compared with that of similar departments of the larger industrial concerns of the state, the Health Service of the University of Illinois has a very much rounded out program.

Taking care of the student's health has become a well-defined task—especially so this year with a much larger enrollment than ever before. But rather than being an unsolved problem, it is quite the contrary, the solution being found in the fact that a well-organized Health Department finds itself busily engaged throughout the year in its service to some seventy-two hundred students.

The University of Illinois Health Service is headed by Doctor Howard Beard, a physician of wide practice, and one particularly fitted for this kind of work because of his marked ability to handle persons of the age of the average student. Assisting Doctor Beard is Doctor Gertrude Moul-

ton and a corps of assistants. Doctor Beard, in addition to being the head and director of the service, is actively responsible for the health of the men, while Doctor Moulton is in direct charge of the physical welfare of the women. There is also maintained a corps of local physicians in the capacity of contract surgeons.

The Health Service has extended very rapidly during the past year (1919), due in a large measure to increased enrollment, to serving a much larger percentage of each class, to a dispensary habit encouraged and promoted during the life of the Students' Army Training Corps, and to first treatment of all employes injured while at the university.

The following table gives one a glimpse of the scope of the year's work:

Student visits	9,977*
Prescriptions	1,391
Surgical Dressings	1,008
Advised to Enter Hospital.....	115
Referred to Specialists.....	168
Excuses Recommended	505
Urinalysis	3,000*
Blood Examinations	23
Sputa Examinations	6
Feces Examinations	3
Diphtheria Cultures	613
Medical Histories Written.....	3,319*
Complete Physical Examinations.....	3,240*

Examining physically, prospective applicants for civil service positions at the University, rendering first aid to workmen injured in the performance of their duty and giving medical advice and assistance to employes, forms a major portion of the welfare work the Health Service renders workmen employed by the University. Medical supervision of employes with infectious disease by seeing that quarantine regulations are enforced properly among workmen and that the necessary precautions are observed when they have infectious disease, limits greatly the chances of spreading communicable disease in the University community. Last year visits from employes numbered 843; 147 were examined physically, and 56 were rendered treatment for injuries.

IMMUNIZATION WORK

During the academic year the Health Service has done more towards the immunizing of the student body against communicable disease, especially smallpox, than in all the years of its existence. This increase is due to the compulsory

vaccination of the men of the S. A. T. C. and the increasing popularity of typhoid inoculation as a war measure. For example, a large percentage of the students in the summer session requested immunization against typhoid. Also, more than 500 members of the University faculty and student body were immunized at their request against pneumonia and took the mixed vaccine for influenza. The immunization done may be summarized as follows:

Smallpox	3,817
Typhoid	3,576
Pneumonia	313
Influenza	206
<hr/> Total	<hr/> 7,912

*Including Students' Army Training Corps.

Vaccine for this work was obtained from the United States Public Health Service, the Army Medical School, the Mayo Clinic, the State Department of Health, the research laboratories of the New York State Department of Health, and the Rockefeller Institute.

In the typhoid immunizing work the "lipo-typhoid" vaccine was introduced, through the cooperation of the Army Medical School, and the one dose feature appealed to both physician and patient alike, over the three dose treatment formerly used.

Although vaccinations for influenza are in the experimental stage, a certain degree of satisfaction was gained through results secured. The summary of the influenza immunization is as follows: •

Number receiving 3 doses.....	116
" " 2 "	15
" " 1 "	10
<hr/> Total Vaccinations	<hr/> 141
Cases of influenza after 3rd dose.....	16
" " " 2nd "	5
" " " 1st "	1
<hr/> Total Cases After Vaccination.....	<hr/> 22
Number of persons stating that they believed vaccine helpful	76

Of the 313 students and faculty members immunized against pneumonia none had developed pneumonia up to a recent date. Later data may prove illuminating. The smallpox record was good, too, for with 3,817 vaccinations, only one case developed, and that was the case of a man

exposed at the aviation field and came down with the disease while at home.

The student body last year totaled slightly more than 8,000, and the total number of cases of communicable diseases was 1,206. The total number of sick days from such diseases was 9,715, or an average of less than two days per student. The summary:

	Cases	Sick Days
Chickenpox	3	25
Diphtheria	19	179
Influenza	1,086	7,579
Measles	6	77
Mumps	24	448
Pneumonia	63	1,046
Rubella	2	15
Scarlet Fever	1	16
Typhoid Fever	2	125
Whooping Cough	1	25
<hr/> Total	<hr/> 1,207	<hr/> 9,715

Influenza was, of course, the most trying epidemic that ever visited the student body; 1,086 students sought hospital treatment for a total of 7,579 days. About 50 cases were reported among faculty members and their families. The disease caused a total of 23 deaths during the year, distributed as follows:

Students	17
Faculty	2
Employees	2
Aviator	1
Outsider	1
<hr/> Total	<hr/> 23

The "flu" epidemic developed two points: 1. If the patient was put promptly to bed his chances of recovery and avoidance of serious complications were greatly increased. 2. The smaller the number of students living in a rooming house the fewer the number of cases in proportion and the less their severity.

Venereal disease among students is rapidly declining, according to last year's records, for only three men were under observation for gonorrhea, and no cases of syphilis came to the attention of the Health Service.

For the general welfare of the state, the Health Service is having printed and mailed each week to a large number of state papers a bulletin under the caption, "The Health Adviser." Through its pages it deals with health, hygiene and sanitation problems in such a manner as to find publication

in a large percentage of the papers to which the material is sent.

The health department is soon to have a new home. So rapidly has the work grown that the headquarters of the service has been moved from place to place to gain more room. However, work will soon begin on the construction of the University Hospital, a gift from Congressman William B. McKinley. The structure will be three stories in height, will cost approximately \$150,000 and will be used exclusively for the welfare of the health of students.

OBSTETRICS*

J. S. TEMPLETON, M. D.

PINCKNEYVILLE, ILL.

The greater your experience the less you feel that you know, is as true in obstetrical work as other things. In an advertisement recently a statement something like this appeared: "A certain physician reads an obstetrical work from cover to cover every year and if all who practice obstetrical work should do the same America would soon become famous for its work in obstetrics." The statement is very true and I heartily agree that we should make it a practice to read a definite amount of good writing on the subject every year. We would certainly realize that there is yet much to learn. It was taught many of us that we should be able to make an accurate diagnosis of the presentation long before the child is born, and we went out to practice the art fully believing that we could when the head or breach was yet high in the pelvis. How often we have found ourselves completely at sea. The fact is, if I can always be sure that I have a head presenting it is a great source of satisfaction. I can not always be sure that it is left occipito anterior and often times there is a great difference when you are compelled to use forceps. If things that are apparently so easy are yet so hard it certainly behooves us to occasionally glance at some of the real knotty problems that confront the profession in obstetrical work. Not many years ago midwives were common, but they have given way, especially in country work, to the medical profession. If we are to be found worthy of the trust we must prepare ourselves to do far better work

than they did. We get more pay and must give more service.

Permit me to report some work that to myself was very unsatisfactory. Yet my vision to this time is not broad enough to know what could have been done that would have produced better results without resorting to entirely different methods than commonly practiced in rural communities.

The first case was a multipara who came to our town from another twenty-five miles distant and was transported five miles in a buggy to get to the train after labor had begun. After the journey thus and twenty-five miles on the train she was again conveyed more than half a mile to the home where she expected to remain. They called for help about eight P. M. and when I arrived found everything apparently normal except a badly scarred cervix which upon inquiry they informed me had been torn during her first delivery and had been immediately repaired by one who according to reports must have been an amateur at the business. Labor progressed in an apparently normal way until the head was almost born when the pain seemed to slacken. Feeling a little petuitrin at that time would be beneficial she was given almost a C. C. which increased the pain and produced labor apparently normal but very painful. The placenta was delivered as usual and altogether little more than three hours after I was called were consumed by delivery. The patient complained of pain and hemorrhage was profuse, but after two hours I considered her well enough to leave and went home for the night. Two hours afterward I was called and upon arrival found her very anemic and fainting. She was given another C. C. of petuitrin hypodermically and all other means used to restore her, but of no avail. The uterus was badly torn and though it did not seem that there was a great amount of hemorrhage it was evidently sufficient to cause her death. Why this death four hours after delivery? Was it postpartum in a true sense or hemorrhage from an artery of the cervix uteri? The uterus seemed properly contracted when I left two hours after delivery but was not two hours later. My opinion is that the death was caused by the hemorrhage from the cervical tear and that the lack of contraction was due to weakness after four or five hours of slow bleeding.

In another case where the cervix had been repaired by an amateur, in fact it was probably his first case of that kind, I was called when she was about seven months pregnant, found her suffering some pain and upon digital examination discovered that there was slight dilatation and a badly scarred cervix that had been sewed so much and in such a way that it seemed impossible for her to give birth to the child. She was given a hypodermic of morphin and this was followed the next day when conditions were found to be much the same by another. Both gave temporary relief from the pains, but the third day they came stronger than before and a fourth of a

*Read before Southern Illinois Medical Society, November, 1919.

grain did not relieve her. Some two hours after it was given the dilatation increased and considerable hemorrhage was noticed. Chloroform was administered, the child turned, delivered by the feet, and, in a flow of blood, the placenta also delivered. The child was dead so all attention was given the mother, shock was apparent and as the effects of the chloroform wore off she complained of pain. Hemorrhage was checked but continued in mild form for a time. Remembering my experience with the other case, consultation was asked for. After examining the case carefully my consultant, a man of much experience covering many years of successful obstetrical work, advised that the patient be let alone. Ordering ergot and strychnine given liberally we left her about five P. M. She died about nine P. M. the same day. Whether hemorrhage again occurred could not be ascertained. This case also sustained considerable cervical laceration though only about seven months pregnant.

Our teachers tell us even in recent obstetrical work that cervical tears easily heal if left alone and that to leave them alone is the better course on account of the danger of infection. In these cases the hemorrhage seemed to be under control and when the uterus was contracted the tear did not appear from digital examination to be very large. It seems to me the question of repairing immediately all cervical tears of any importance is favored by these cases, even though one of these had been so repaired. Under our present methods of asepsis perineal repair seldom causes infection if carefully done, and why should we not be equally successful with cervical work? We can hardly charge the fatality of the first case to the time it was repaired and while these two, my only deaths, were patients who had been repaired, there is no record that it has been so with others in obstetrical work. The question in my mind is an open one and should be considered by every conscientious obstetrician.

Another case it seems to me should be considered along with those mentioned not for the like conditions or results but for the demand for other than the treatment usually given. A young woman thirty years of age, primipara, short, stout and apparently close built, had worked in a store several years, standing on her feet all the time. She approached the lying in period with some forebodings and not only she but her family and physician were all but jubilant. However, when the time came a normal presentation and apparently normal pains allayed our anxiety for a time, but, as hours wore away and progress became less it was decided to use forceps. Easier said than done, but they were finally applied and after, or rather

during a difficult delivery, it was observed that the pubic bones had separated.

True rest in bed and a snug bandage brought this patient back to something like normal after months of inconvenience, physical and mental suffering, but the question arises, was all this suffering necessary to produce the lovely daughter now growing up, the pride of her parents?

We again face the idea of new methods, or rather methods that have been advocated, but little practiced, in most of our communities. Shall we continue in the old way or shall we resort to surgical methods of delivery? Would not a Caesarean section have been less dangerous for both this mother and child? Am sure had they survived the mother would be in much better condition today. Can we not select our cases carefully and intelligently and refer them to competent surgeons, whom we have all about us, and save a greater per cent of these cases that we now lose or leave to suffer for life from the effects of difficult labor? It will not be long until hospital accommodations will be near to the greater number of us and the methods and technique of Caesarean operations so improved that few lives will be lost. Let us either resort to more radical measures to stop these cases of slow hemorrhage or refer them to surgeons who will treat them more in the light of present-day surgery. One thing seems to me as peculiar that in more than eight hundred cases attended before I began the use of petuitrin not a case was lost by hemorrhage, and that two deaths have occurred in a little less than three hundred cases since. And not only in my own practice but I have known of at least three similar deaths attended by others since the use of this drug became common. This is not saying it should never be used, but mentioned because I believe extreme caution should be adhered to in its administration.

In the third case it is not a question of cause, but one of prognosis. How can we determine when we have a case that will be of such delivery that almost or even incurable results will follow?

All who practice obstetrics will be confronted with these problems, so let us consider them carefully that we may always do the best possible for those we serve.

Let us remember the words of Edwin Arnold: "Love thyself last. Drink deep the nectared anodyne of selflessness."

THE PROBLEM OF THE TUBERCULOUS PREGNANT WOMAN*

C. HENRY DAVIS, M.D.

MILWAUKEE, WISCONSIN

The problem of the tuberculous pregnant woman is one which confronts every physician. These unfortunate women are found in every community. Most of them are cared for by the general practitioners and not in institutions, where they may be carefully observed and the end results reported for the information and guidance of the medical profession. These cases are so scattered it has been impossible for any physician or group of physicians to study, treat, and report the end results on a series large enough to warrant definite conclusions. Yet the statistics of writers from different parts of the United States and other countries agree so closely in the small series studied we may accept them as a basis for this study.

Tuberculosis and pregnancy are the two most dangerous conditions to which women of child bearing age are commonly exposed. Tuberculosis with pregnancy is a very fatal combination. The mortality statistics of 1915 for the area of registration of the United States shows that 29,200 women aged 15 to 45 died from tuberculosis and 10,134 from childbirth. For the entire population this would mean 43,666 deaths from tuberculosis and 15,103 from childbirth. Bacon estimates that from 1 to 1.5 per cent of all pregnant women have tuberculosis to such a degree it can be detected if a careful examination is made and that between 24,000 and 36,000 tuberculous women are confined in the United States each year. A small percentage of these tuberculous women die from puerperal sepsis and the other immediate accidents of childbirth, but a much larger number die subsequently and tuberculosis is given as the cause of death. The number of these unfortunate women that die can only be guessed at on the basis of death percentages reported in small series, as childbirth is unfortunately not recorded on the death certificate as a secondary or contributory cause of death.

Incidence of Tuberculosis Among Pregnant Women: The relation of pregnancy to the incidence of tuberculosis is debatable, yet the strain of pregnancy is undoubtedly responsible for the

active symptoms of phthisis in many women. The percentages reported in the literature vary, but to a considerable extent this is due to different methods of making comparisons and tabulating. Trembley of Saranac in a series of 240 cases had 151, or 63 per cent, who said the tuberculosis originated or at least was first discovered *after the birth of a child*. Turban of Schauta's clinic reports that 20 per cent of the tuberculous women observed by him gave a positive history of the disease originating or becoming definitely recognizable *during pregnancy or the puerperium*. Fishberg states that of 286 tuberculous married women under his care, 107, or 37.4 per cent, claimed they had no pulmonary symptoms until *after one or more childbirths*. In a series of 337 cases studied by P. Jacob and Pannwitz, 25 per cent *traced the origin or aggravation of the disease to pregnancy*. Morogliano, in studying 385 cases, found 226, or 59 per cent, who believed the tuberculosis had *started in pregnancy*. Scarborough reports 94, or 47 per cent, of 200 married women admitted to the Iowa State Sanatorium in whom the active symptoms *appeared after childbirth*. Douglass and Harris found that of 300 women with a history of pregnancy admitted to the Ohio State Sanatorium, 88, or 29 per cent, gave definite evidence that pregnancy was the leading factor to which the onset of tuberculosis might be attributed and in 24 additional cases or 8 per cent it was a presumptive factor, making a total of 37 per cent of patients in whom pregnancy was a contributory cause of tuberculosis.

Effect of Tuberculosis on Pregnancy: There is little indication that spontaneous abortion is any more common among tuberculous women than among others, yet tuberculosis is occasionally given as the cause of an abortion. Most writers on the subject agree that the effect of tuberculosis on the course of pregnancy is practically nil. However, it is reasonable to believe that the tuberculous woman may suffer to a greater extent from the various disorders of pregnancy than will her more healthy sister. The greatest danger is during labor and the puerperium when sudden death may occur at any time from cardiac failure, pulmonary hemorrhage or pulmonary edema. However, I recently had a case at the Milwaukee County Hospital where cardiac failure occurred during the sixth month of pregnancy. This patient had been admitted to my service while

*Read before Chicago Medical Society, Nov. 5, 1919.

awaiting admission to the tuberculosis sanatorium.

Effect of Pregnancy on Tuberculosis: In cases of known tuberculosis there may be an increase of gastric symptoms during the first trimester. During the second trimester a considerable percentage of these patients show a definite improvement due to the increased metabolism, and some continue to term without evidence of decline. But during the last trimester many of the patients lose strength with an alarming rapidity and may die at any stage of labor or the puerperium. Most of the advanced cases will have died within a month after delivery.

Statistics indicate that existing tuberculosis is usually aggravated by pregnancy. Lobenstine states that 38 per cent of the tuberculosis patients at the Lying-in-Hospital of New York were seriously affected by parturition. Of the 100 cases studied 19 were dead of tuberculosis when he made the report, and all but two had died in less than a month after delivery. Diebel believes that 64 per cent of tuberculous women are badly influenced by pregnancy; v. Rosthorn 70 per cent. V. Bardeleben wrote that from the communications of fourteen physicians 71 per cent of tuberculous women grew worse from parturition and that 47 per cent of the active cases proved fatal. (Lobenstine.) Norris and Landis report that in their experience about 20 per cent of mild, quiescent tuberculosis and 70 per cent of more advanced cases exhibit exacerbatations during pregnancy and the puerperium. McSweeney and Wang report eighteen childbirths at Sea View Hospital. In their summary these authors state that during pregnancy ten (55.5%) seemed to retrograde, five (27.7%) to improve and three (16.6%) were apparently unchanged. After labor of the moderately advanced cases seven were improved, of the far advanced cases five (45.5%) died, one (9%) improved, and five (45.5%) retrograded. This series, while very small, is valuable owing to the careful hospital treatment.

Under present conditions it may be estimated that about 33 per cent of the tuberculous women who become pregnant die in less than a year after delivery.

Experience and statistics agree that pregnancy is a most serious complication of tuberculosis. They indicate that the problem of the tuberculous pregnant woman has not been satisfactorily

solved. Perhaps there is no solution for this problem, yet much may be accomplished toward lessening the plight of women thus afflicted.

In any attempt to deal with tuberculosis and pregnancy, the women must be divided into two classes. First, women in whom a diagnosis of tuberculosis is made before they become pregnant, and second, those in whom the diagnosis is made after they are pregnant.

Non-Pregnant Tuberculous Women: Tuberculosis is a contraindication to marriage only secondary in importance to gonorrhea and syphilis. Women with a history of tuberculosis should not marry until some years after all evidence of active symptoms have subsided. Before marriage these women should be instructed regarding the dangers of a recurrence during pregnancy. They should be made to appreciate the importance of receiving the maximum of rest, fresh air, good food and expert medical supervision during the entire period of pregnancy, labor and the puerperium, and for many months thereafter.

The married woman who develops tuberculosis should be instructed in the mechanical means of avoiding conception. It is useless to advocate long continued abstinence. Should she, in spite of advice, become pregnant, sanatorium care is recommended, as few women will secure the needed rest, fresh air and proper food at home. An attempt should be made to bring her through the pregnancy with the least possible damage. A healthy child may usually be expected, but it should be removed from the mother at birth. Nursing is rarely, if ever, advisable in these cases, since it seals the fate of the mother and exposes the child to a practically certain contact infection. For this first type of women the problem can only be solved by the slow process of education and the moulding of public opinion.

The plight of the second class of women is more sad, since they did not approach marriage and pregnancy with any knowledge of a tuberculous complication. In many cases overwork and unhygienic conditions combined with the strain of pregnancy is responsible for the active tuberculosis. Latent foci, never suspected or long inactive, flare up and often run a violent course. These women require sanatorium care. The tuberculosis is usually discovered too late for even a consideration of therapeutic abortion.

Management of the Pregnancy: The treatment of pregnancy in tuberculous women may be divided for discussion into active and expectant. Many physicians believe that if the tuberculous woman is seen during the first three months of pregnancy she should be advised to have an abortion. They are impressed with the high mortality of tuberculous mothers subsequent to their deliveries and the fact that such a high percentage of children born to tuberculous mothers early develop signs of tuberculosis. Termination of pregnancy subsequent to the first trimester has shown such a high mortality that it has been discontinued.

Within the past ten years a small group of physicians have questioned the advisability of emptying the uterus during the first three months. Experience has shown that many of the women so treated have a rapidly fatal course. The shock of the anesthetic and abortion may do as much harm as that of labor. There is no certain method of determining which patients may be benefited, which harmed. Bacon finds that the collected results of therapeutic abortions are not favorable, and does not consider abortion justifiable in over ten per cent of the tuberculous pregnant women. Veit reports that there was no improvement following abortion in 43 per cent of the cases collected by him. Trembley, who at Saranac Lake with patients under most favorable conditions, has perhaps aborted more women because of tuberculosis than any other physician in the United States, has not seen enough improvement to warrant the establishment of a general rule. V. Bardeleben states that 50 per cent of his cases died after the pregnancy had been terminated by abortion. A study of the literature leads to the suspicion that the end results would be as favorable without abortion if the patients could have adequate care during the entire period of pregnancy, labor and the puerperium and did not nurse their babies.

A step in the right direction was made in Chicago when the Municipal Tuberculosis Sanatorium was provided with an obstetrical section. Dr. Bacon was largely responsible for this advance and it is hoped he will eventually be in a position to give us more definite knowledge regarding the relative merits of the active and expectant treatment of pregnancy with tuberculosis.

The 30,000 or more tuberculous women who

will become pregnant in the United States next year are scattered from Maine to California. They will be cared for by perhaps 20,000 different physicians. No one physician or group of physicians can solve this important problem from personal observation. It must come from the combined efforts of the many. If for a period of five years every member of the American Medical Association could be induced to keep a careful record of the tuberculous pregnant women in his practice and as each case is terminated by death or recovery, forward a summary of the case to some central office, as for instance, the editor of the Journal of the American Medical Association, it would be possible to secure statistical information which would be invaluable in the treatment of these unfortunate women. This is especially important in connection with the questionable procedure of therapeutic abortion.

Pregnancy is a contributory cause in many deaths from tuberculosis, but for some unknown reason is rarely if ever so recorded on the death certificates. Health departments could aid greatly in determining the number of deaths from this combination if they would require that when a woman declines rapidly after childbirth and dies within a few months from tuberculosis, childbirth or pregnancy be given as a contributory cause, and *vice versa*.

The problem of the tuberculous pregnant woman may only be lessened by the co-operation of the profession and the gradual education of the general public.

THE NEED FOR CLOSER RELATIONSHIP AND CO-OPERATION BETWEEN DEN- TIST AND PHYSICIAN, AS RE- VEALED BY FOCAL INFEC- TIONS*

CLIFFORD E. SMITH, M.D.
DEKALB, ILLINOIS

Mr. Chairman and Members of the Fox River Valley Dental Society.

I consider it a great honor to be asked to address a dental organization, especially as I do not belong to the dental profession myself.

The focal infections about the teeth as I have learned to view them are mostly grouped under the headings of pyorrhea and root abscesses. The

*Delivered at Geneva, Ill., Dec. 4, 1919.

former may be seen with the unaided eye, but the latter very commonly need the aid of the x-ray. Devitalized or dead teeth are dangerous teeth, for infection may develop about these roots unknown to the individual, because the sentinel nerve has been destroyed. This infection, through the lymphatics and blood vessels, may be carried to some other vital organ and cause irreparable damage before the primary source of infection is located. Infective material from pyorrhea may be expectorated or ingested, but usually the only drainage from root infections is into the system and hence they are more dangerous.

Allow me to present the following case histories:

CASE 1. Miss E. D., aged 41 years, came to me Oct. 15, 1918, with a severe iritis in the right eye. Duration two weeks. From September, 1917, to January, 1918, she was confined at home with inflammatory rheumatism. In January she was removed to the Presbyterian hospital in Chicago and was under the case of Dr. Herrick. In March, 1918, she was able to return home, but had had frequent rheumatic pains up to the present date. I examined her for a focal infection, but could find none. To me her teeth looked O. K. and the tonsils seemed healthy. I treated the eye condition and gave her anti-rheumatic treatment for two weeks without improvement. I was worried for the safety of the eye and recommended that the tonsils be removed on general principles in the hope that there might be some hidden pocket in them. She had already visited her dentist and he had pronounced her teeth in good condition. My patient did not wish her tonsils removed and decided to tell me about a little painless spot on her gum below the right lower second bicuspid. By squeezing on this insignificant painless little spot she could express a drop of pus. I had Dr. Simpson of Sycamore extract the tooth that same afternoon. The next day her eye was better and in a week it was well. One month later she told me she had never felt better in her life.

CASE 2. Mrs. W. N., aged 48 years, had right iritis in July, 1915, and again in December, 1918. She recovered from the first attack under local treatment for the eye and anti-rheumatic measures. The second attack was more stubborn and I noticed she had a marked pyorrhea. I referred her to Dr. A. C. Spickerman, who treated the pyorrhea and had her teeth x-rayed. The latter showed apical abscesses of the two upper central incisors. For a time she refused to have these two teeth extracted, but finally gave in because the eye did not get better. There was immediate improvement and recovery within a week. There has been no recurrence of her trouble since.

CASE 3. Mrs. H. W. C., aged 39 years, came to me in March, 1919, complaining of throat trouble, stomach trouble and a general run-down condition. She had been to Mayo Bros. and at the Battle Creek San-

itarium without improvement. I found more or less inflammation about the roots of the teeth. Many of her teeth were crowned and there were several pivot teeth. The gums over these teeth were bluish in color. There were pus pockets in the tonsils. On March 31 under ether I removed her tonsils and Dr. J. A. Spickerman extracted all her teeth. She now has a set of "store teeth" and a healthy mouth. Her husband tells me it smells nicer and the nicest thing of all is that she can eat like other people and is a well woman.

CASE 4. Mr. H. W. N., aged 28 years, was referred to me January 20, 1917, by Dr. C. H. Wilkinson of Waterman, Ill. Severe pain about right ear and in right temporal region. A mastoid was suspected, but I could find no temperature, no impairment of hearing and no swelling about the ear. There was only pain and tenderness. In the mouth I found the right lower second bicuspid and first and second molar teeth to be in a carious condition with pus oozing out between them. I made the diagnosis of "Neuralgia or Neuritis of the auriculo-temporal branch of the right Inferior Dental Nerve," and recommended the extraction of the three teeth. He had two of the teeth extracted that afternoon, but was not relieved. The next day he consulted a well-known Chicago surgeon, who diagnosed right mastoiditis and operated January 20, 1917. The surgeon searched faithfully for pus, opening the mastoid cells, the zygomatic cells and destroying forever the man's hearing in the right ear. His family physician was present and eleven days later, January 30, 1917, reported to me that they found only congestion as usually accompanies a neuritis. Following the operation the patient suffered greatly increased pain and came to me again Jan. 30, 1917, before the wound from the operation was completely healed. I dressed the wound and sent him back to the dentist for the removal of the third tooth. There was prompt relief from the neuralgic pain and there has been no recurrence.

We do not always secure quick and miraculous results as there may be more than one focus of infection, but if we do our best to carefully examine every case and thoroughly treat every little focus of infection we will secure a great many happy results. I believe there are many cases of chronic stomach trouble caused by the ingestion of pyorrheal exudate along with the food. Clean teeth are more important than clean hands and faces. Many cases of pain in the ear are not carache, but neuralgia from a bad tooth. We physicians need the help of the dentists in curing up many of our patients suffering from toxic infections. We want the dentist to look farther than the teeth. We want him to see the whole body. An eye is more important than a tooth and so is the hearing, and, above all in importance, is good health. If, when a physician sends you a

case to treat you will go after it quickly and thoroughly and help him to get a good result and a well-satisfied patient, I am sure he will take more notice of the mouth and send you more cases. Let us boost for a closer co-operation between physician and dentist.

WHAT SHOULD WE DO WITH BLADDER TUMORS?*

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Attending G. U. Surgeon to the Michael Reese Hospital.

CHICAGO

It may be laid down as a principle that tumors of the urinary bladder should be dealt with without opening the viscus, and that exceptions to this rule ought to be made only if certain well defined exigencies force them on the operator.

For the treatment of vesical tumors *per vias naturales* we have at our command fulguration, galvanocautic, and the placing of radio-active substances into the viscus.

It is a matter of experience that even single papillomata, benign to all appearance, if removed by excision after the bladder was opened, show a marked tendency toward rapid recurrence, which as a rule is multiple.

In a good many cases these recurrences are so intense that the whole inside of the bladder may become studded with these growths, leading to a true papillomatosis of the vesical mucosa, a condition extremely difficult to deal with.

Therefore among all the men who are familiar with endovesical manipulations, the cutting operation for the removal of vesical papillomata is abandoned in favor of the operation executed without opening the bladder. As to the choice between fulguration and the use of the galvanocautery the following considerations will guide our decision.

Fulguration, the destruction of a tumor by means of the spark derived from high frequency currents, is a method easily applied, and does not even call for a special cystoscope. Any cystoscope fitted out for ureteral catheterization may be used for this purpose. In all cases of papilloma that are of a securely benign character fulguration is the method of choice. But if a papilloma is of a meaty character, if at its free circumference or at its base there should be

signs of circulatory disturbances, due to infection, or malignant degeneration, fulguration may be a failure as to eradication, and may even carry with it certain elements of danger. It is a matter of experience that basal infection may be forced into the surrounding structures by the fulguration; fatal peritonitis was observed in such instances, or that in cases of malignant degeneration, an explosive recurrence as the result of this interference may obtain, recurrence of such an extent that in a short time after the fulguration the whole pelvis became filled with carcinomatous masses. Such untoward results are easily understood if we consider the character of fulguration.

The spark not only burns, but also smashes the tissues. Tissues devitalized by divulsion furnish an excellent soil for the colonization of pathogenic germs. The mechanic action of the spark may also, in cases of malignancy, carry cancer cells in the torn adjacent structures, thus fostering the implantation and development of inoculated cancer in these areas.

In all instances in which a doubt concerning the benign character of the papilloma should be justified or if signs of inflammation are present, fulguration should be supplanted by the galvanocautery. This method evades the concomitant dangers of fulguration, as quoted above.

Endovesical galvanocauterization may be easily administered through an operative cystoscope, and if not thoroughly successful as to cure, at least will not lead to disastrous results due to the interference. Fulguration and galvanocautic ought to be followed in all doubtful or border cases by the placing of radioactive substances into the bladder.

The surgery of pronouncedly malignant tumors of the bladder constitutes one of the saddest chapters of the, as a whole, so unsatisfactory surgery of malignant tumors in general. It seems that the operative risks are out of proportion with the possible gain. The extirpation by the knife of malignant vesical tumors, necessarily implying an extensive operation, carries with it a high primary mortality.

The period of convalescence of the patient is irksome and tedious, and even the most extensive operations are almost invariably followed by early relapses. This is also true of tumors that are located in the parts of the viscus that are

easily accessible, and lend themselves readily to thorough excision and resection. These facts induced the majority of the urologists to refrain in malignancy of the bladder from cutting operations with a view at extirpating the tumor, and to restrict the surgery by the knife to answer the urgent indications only. The bladder is opened for the purpose of drainage, in cases of urosepsis, or in order to control an otherwise unmanageable hemorrhage, or to set the bladder at rest, because the vesical spasms become unbearable.

The liberal opening of the bladder and the accruing free access to its interior permit the administration of a treatment that at the present time seems the most satisfactory method of dealing with malignant tumors of the bladder that resisted the endovesical application of radioactive substances. This treatment consists in the destruction of the growth by diathermy.

Surgical diathermy means the coagulation of structures by the heat that is produced by the resistance of the tissues offered to high frequency currents that are sent through them. Surgical diathermy or electro-coagulation permits of exact dosage, the limitation of the power field lies within the choice of the operator, and it guarantees permanency and consistency of action throughout its application.

The immediate sealing of all the lymphatics and lymph spaces around the tumor prevents inoculation metastases and disseminating of infection, and invasion of the system by the products of burning. This and the great technical advantages in its use constitutes the superiority of diathermy over the galvanocautery and the soldering iron.

Hemorrhage is stopped immediately, the whole tumor is transformed into a leathery crust, and now the bladder is closed up again except for the opening admitting the drainage tube. Not the least advantage of this procedure is furnished by the fact that the coagulation of the tumor immediately relieves the patient of all the pain that was perceived in the growth, or irradiating from it. In most instances the operator will experience the satisfaction that after the shedding of the crust and the following epithelialization of the resulting granulating surface, the vesical sinus will close up, the bladder will resume its normal function and the patient will be kept

in good health for a period that may extend from months to years.

It is of course understood that the diathermy is always followed by radiotherapy. It is true that in a few instances the bloody operation of malignant vesical tumors was followed by longer periods of freedom from recurrence—but one may also put up the contention that it is highly probable that such cases may have been also successfully treated and without any risk and certainly with less suffering by radiotherapy, and if necessary preceded by diathermy.

TREATMENT OF HEMORRHAGE AND SHOCK BY INTRAVENOUS SOLUTIONS OF WHOLE OR CITRATED BLOOD AND GUM SALT SOLUTION.*

E. A. LYNWOOD, M. D.,
(Deceased, May 26, 1920.)

CHICAGO

The transfusion of blood of boys into the vein of Pope Innocent the 7th, is the earliest record of this method and dates back to 1492. Strangely enough this antedates the discovery of the circulation of the blood by Harvey in 1628. Since this time many attempts at transfusion have been made, but it is only in recent times that its practicability has become possible by the patient experiments of operators who have studied the various techniques and demonstrated the reasons for success and failures.

The Causes of Failures are: 1. the incompatibility of the bloods of the donor and recipient; 2. the transmission of acute or chronic disease from one person to another; 3. acute dilatation of the heart; 4. air embolism and 5. finally blood embolism.

Indications: 1. The indications for transfusion aside from hemorrhage and 2. shock are: 3. diseases of the blood, as pernicious anemia, secondary anemia, hemophilia, purpura hemorrhagica and bleeding of the new-born, 4. toxemia due to pregnancy and acute infectious diseases, 5. infection and 6. general debility.

In the recent world war the conditions for transfusion of blood were often impossible, but the gum salt solution was frequently used with

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excellent results. In cases of low blood pressure due to loss of blood and shock, it is necessary to restore normal pressure and, it goes without saying, that the transfusion of blood supplies both the volume and corpuscles to the circulation. Unfortunately, many cases required immediate transfusion, and when the proper donor was not available, some substitute had to be devised, and the solution of Bayliss, known as the gum salt solution was employed. The advantage of this solution which is much like the blood plasma, is that it remains in the blood-vessels longer than the normal salt solution, and produces more lasting blood-pressure. Naturally it has not the oxygen carrying power owing to the absence of red corpuscles, but the patient's remaining corpuscles are more quickly sent through the vessels because of the greater blood pressure.

The use of unmodified blood has a few enthusiastic champions whose success depends largely upon their perfected technique and specially devised instruments. The methods of Kimpton and Brown, Lindeman, and Unger have done much to demonstrate the value of whole blood transfusion, but while they claim a superiority for the results and lesser and infrequent dangers, their methods will probably not be as readily adopted as those which use either the citrated blood or gum salt solution. In cases of hemorrhage and shock, the citrated blood or gum-saline solution is sufficient, whereas the other indications apparently call for the whole unmodified blood.

The dangers to the recipient, the iso-agglutination and isohemolysis are important. Tests made to eliminate the possibility of agglutination, protect against hemolysis. It goes without saying that the blood of the donor and the patient must be examined to determine the suitability of the donor. The method of Unger modified from Ruox and Turner is simple and is as follows; mix one part of 10 per cent sodium citrate and ten parts of the patient's blood in a pipet such as used to count leucocytes; make a similar specimen of the donor's blood. Take nine parts of the mixture from the donor to one part of the patient's and mix it in a third pipet; then make another mixture with one of the donor's and nine parts of the patient's. Put a drop of each of these mixtures on a slide, adding a drop of physiologic sodium chloride solution, apply a cover glass and examine under a microscope.

Clumpings but *not* rouleau formation indicate agglutination and the blood of such a donor is dangerous and must not be used.

Dosage. The dosage of unmodified blood varies according to the age, infants requiring no more than 80 to 150 c. c., and adults not more than 800 to 1,000 c. c.

The donor evidences an excessive loss of blood by changes in pulse and respiration. Yawning and sighing are signs of insufficient oxygen carrying qualities of the blood, and pallor and sweating being forerunners of collapse should warn the operator to discontinue the further withdrawal of blood. Hypertransfusion of blood may have fatal consequences in the recipient and all signs as headache, tightness of the chest, pain in the back or legs should be regarded. Cough is a very significant symptom and under no circumstances should more than 200 c. c. be transfused after the first cough, for pulmonary edema and death may follow.

The Gum Salt Solution. The gum-saline solution contains 6 per cent of gum acacia and 9 tenths per cent of sodium chloride in, preferably, distilled water. Tap water if used, must be boiled and filtered to eliminate the calcium carbonate, which would otherwise be precipitated in the final product. The acacia is best used in the form of tears as the powdered gum is not infrequently adulterated with starch or dextrin. If, however, the powder only, is available, it may be mixed with the fingers in the salt solution until a gum is formed, and then by stirring this is dissolved in the remainder of the solution. The tears are simply dissolved by stirring in the salt solution and this is more quickly affected by boiling for six minutes. As a sediment settles in the bottom of the container, it is well to allow the solution to stand for 24 hours. Add water to restore the amount lost by evaporation or otherwise. The filtration of the solution is done first by passing it through cotton and finally through coarse filter paper. The cotton should line the funnel in two layers at right angles to each other and extend upwards to the rim, supported by a layer of gauze and held in place by a few glass stoppers. Pass the filtrate through the same cotton a second time, and if available use suction both times to hasten the process. The clarification is finally affected by passing the filtrate through double filter paper of coarse texture. As the solution of acacia in normal salt solution has

an acid reaction, it is necessary to neutralize before use. Neutralize 10 c. c. of the solution diluted to 25 c. c. with distilled water and titrate with one-tenth per cent normal sodium hydrate solution, phenothalein being used as an indicator. Having calculated the amount of sodium hydrate solution necessary to neutralize the gum salt solution, add a normal sodium hydrate to just exactly neutralize the entire preparation. The finished product must not be alkaline and should be sterilized. Use flasks or hard glass bottles and autoclave at 120 degrees centigrade for one-half hour not removing until cool. Warm the solution to 110 F. and introduce into a vein in accordance with the usual methods of transfusing saline infusions. About 500 c. c. is the amount necessary to produce sufficient arterial blood pressure, but if the exigency of the case requires it, the same amount may be repeated.

The technique of Lewisohn for the transfusion of citrated blood is this: It is necessary to have two large and two small glass jars, two small ampules each holding 25 c. c. of a sterilized two and a half per cent sodium citrate solution, two cannulas, one large to take the blood from the donor, the other small to convey it to the recipient, a glass rod, and a salvarsan flask supplied with a rubber and glass taper connection. The arm of the donor is to be prepared by washing with soap and water and alcohol, and if the veins are visible cover the parts with iodine. Distention of the veins is produced by the use of the tourniquet above the elbow and the blood removed by the aid of the large cannula, and if the blood does not flow in a large stream, the vein may be exposed by an incision. A large jar should be used to receive the blood, and should contain one-half the amount of the sodium citrate solution necessary to make the finished blood product contain two and a half per cent of the citrate. The usual dose is 500 c. c. of citrated blood and hence the large glass jar should contain 25 c. c. of the two and a half per cent citrate solution before the blood has been taken from the donor, and after 250 c. c. of blood has been collected, the other 25 c. c. of the citrate solution may be added. The blood and citrate solution must be thoroughly mixed by stirring with the glass rod in order to prevent coagulation. The recipient's arm is prepared in the usual way

and the vein exposed by an incision. The small cannula is inserted into the vein and after the salvarsan flask has had about 50 c. c. of saline solution pass through the tubing, the citrated blood is poured from the jar into the flask. The small cannula and tubing are connected and the blood injected into the recipient.

CONCLUSIONS

In severe hemorrhages, especially acute, transfusion of citrated blood or gum salt solution is of great value. The sooner the transfusion is made, the better. In shock, early transfusion is of value. The advantage of citrated blood over whole unmodified is the facility of use, less danger of contamination, may be carried at a distance, and premonitory symptoms of hemolysis may be looked for after injecting 10 c. c. of citrated blood.

Whole unmodified blood is better than citrated blood in conditions which call for tissue building, and it less often causes reaction and chill.

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DISCUSSION

DR. CHAS. HUBERT LOVEWELL: Recently we have been using a simplified technique of determining the Moss grouping as brought out by Vincent of Boston. By this method the patient and donor can be grouped in a few minutes and without any special laboratory apparatus.

In using this method, one must keep on hand a little serum from an individual in group 2 and one in group 3, the test being made without separating the cells from the serum and without using any chemicals. A drop of No. 2 serum is placed upon one end of a glass slide and a drop of No. 3 on the other end. A drop of the blood which is to be tested is mixed in each of the serums and their action noted. If agglutination takes place in group No. 2 serum and not in group No. 3, the individual being grouped is group No. 3. If agglutination takes place in No. 3 serum and not in No. 2, the individual is in group No. 2. If there is no agglutination in either serum, the individual is in group No. 4, and if agglutination takes place in both serums, the individual is in group No. 1. The agglutination will take place usually within thirty seconds and practically always within two minutes and can easily be seen microscopically. If the reaction is slow and not very marked, and there is any doubt about agglutination having occurred, this can be determined with certainty by placing the slide under the microscope.

PERNICIOUS ANEMIA AND ALLIED DISORDERS*

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In the present paper an attempt will be made to review certain blood diseases which are the result of disordered function on the part of the bone marrow. Particular emphasis will be laid upon the primary anemias, their diagnosis, prognosis and treatment.

Before taking up the various clinical entities it will not be superfluous to review, in a casual manner, the physiology of the blood-forming organs—more particularly the bone marrow. Without an understanding of this important structure and its reaction to various stimuli, an intelligent appreciation of the conditions under consideration is all but impossible.

It will be recalled that in the adult organism the marrow of the bones is the factory where all the formed elements of the blood, except lymphocytes, are formed. Under normal conditions, hemopoiesis takes place in the flat bones and at the ends of the long bones, but in times of stress the remaining marrow substance may share in blood production. The spleen, which has much to do with blood production in fetal life, and even in infancy, plays a secondary and minor role in later life.

There are three formed elements which arise from the bone marrow: the red cells, the leucocytes, and the blood platelets, and, under normal conditions, the process of production goes on at a rate which insures a uniformity in quantity and quality of these several structures in the circulating blood. Let us now consider each of these elements more in detail.

Red Cells: Working under normal conditions, the bone marrow puts forth the finished red cell—a small non-nucleated body—showing a striking uniformity in size and shape and occurring in numbers which average $4\frac{1}{2}$ to 5,000,000 per C.M.M. There are conditions, however, in which the bone marrow takes on an abnormal activity, i.e., its function may be increased or decreased, and under these circumstances there occur certain atypical red cells.

First, there are the cells which exhibit variations in size and shape—the macrocytes, microcytes and poikilocytes. They tell us that the bone

marrow is being pushed; that it is in such a hurry to make up for blood deficiency that it has not the time to put forth a finished product. The very large cells, seen especially in pernicious anemia, represent a compensatory process, i.e., an attempt to compensate for the diminution in the number of cells by the production of cells which are of sufficient size to contain several times the normal amount of hemoglobin.

Second, the nucleated red cells. These have the same significance; they are immature cells which are put forth in a hurry to meet an emergency, just as in warfare the final draft is made up of boys.

Third, the reticulated cells. These, under average conditions, give the most valuable information as to the activity or inactivity of the bone marrow and are of the utmost importance from a prognostic standpoint. They can be demonstrated only by vital staining methods, i.e., staining the fresh blood with a saturated solution of brilliant cresyl blue. They appear as red cells, in the center of which is a reticulum, or skein-like arrangement, which takes a blue stain. The normal protoplasm of the red cell does not take the stain. These cells represent an immature type of red cell, and in normal blood they are present to extent of less than 1 per cent. When there is increased marrow activity, as for instance, in secondary anemia following hemorrhage, they may rise to 25 per cent and above. They furnish an accurate index of the condition of the marrow and are especially valuable as an index of the progress being made in cases which are undergoing treatment.

Blood Platelets: These important structures have received but little attention at the hands of the medical profession at large, and it is a matter of no little surprise that their significance is ignored by many who strive to make rather elaborate studies of the blood. They have been recognized as entities since the 80's, when Bizzozero and Hayem first worked with them. J. Homer Wright, in 1906, demonstrated that they were fragments of the protoplasm of the megakaryocytes, or giant cells of the bone marrow. They are small disc-shaped bodies about 3 μ in diameter, and their number, in normal blood is from 250,000 to 400,000 per C.M.M. They are visible in ordinary blood films as stained by Wright's stain, and, with experience, a study of stained preparations will enable one to determine

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whether they are increased or diminished. The value of their study lies in the fact that they represent the activity of a definite part of the bone marrow.

The most important function of the blood platelets lies in the role they play in the process of coagulation. An inquiry into the precise nature of their action would take us too far afield, because it would involve a discussion of the various theories of coagulation. Suffice it to say that there is a fairly conclusive evidence that these bodies, either by an alteration in physical structure or by giving off some product through their disintegration, start the process of coagulation. From this it follows that a diminution in number or an alteration in function on the part of the platelets, would result in disturbances in coagulation. There are two distinct diseases, purpura hemorrhagica and hemophilia, which are associated with abnormalities in the platelets.

The third of the formed elements derived from the bone marrow is the polymorphonuclear leucocyte. Its value as an indicator of bone marrow activity in blood disorders is not so great as that of the above named elements, for the reason that the white count is influenced by a host of factors which have no marked effect on the red cells and platelets. Nevertheless, it furnishes valuable contributory evidence in the study of blood disorders, as witness the leucocytosis, which occurs after hemorrhage during the stage of blood regeneration, and the leucopenia seen in pernicious anemia, when blood formation is more or less at a standstill.

Having considered the physiology of the bone marrow, in so far as blood formation is concerned, let us now direct our attention to a few of the clinical disorders of the blood.

Secondary Anemia: This is the most common blood disorder and, as its name implies, is not a disease entity, but a symptom of some graver primary pathological process. It may develop acutely, as a result of a large hemorrhage, e.g., or its development may be slow and progressive, as an accompaniment of some subacute or chronic infectious, toxic or nutritional disturbance. The average blood picture is too familiar to merit description here. However, it is desirable to consider the picture seen in the acute form, because it illustrates very well the process of bone marrow stimulation. A brisk hemorrhage of considerable

amount will result in an emergency call upon the bone marrow for an added amount of blood. Smears taken from 24 hours on, after such an occurrence, will show a hyperplasia of all the formed elements mentioned above. There will be a leucocytosis—an increase in the platelet count, and an increased number of reticulated cells—in direct proportion to the amount of blood lost, and, therefore, to the amount of marrow stimulation. This ability to respond by a production of all the blood elements speaks for a normal bone marrow.

In the type which develops insidiously the blood picture is not so striking for the reason that the stimulus is not so great. Furthermore, in cases of long duration there may ensue, as a result of repeated stimulation, a state of bone marrow exhaustion, with a blood picture which simulates a primary anemia.

Pernicious Anemia: Inasmuch as the classical symptoms of this disease are more or less familiar to everyone, the present discussion will be limited to a consideration of the laboratory diagnosis, the prognosis and the treatment.

The true etiological factor is still a matter of mystery. There have been many attractive theories, but they have not survived the acid test of time. It may be safely said that the bulk of evidence points to a toxic process, and, in the light of our present knowledge, we must be content with the assumption that a toxin—call it the toxin "X" if you will—initiates this baffling disease entity.

It should be emphasized that there is in most cases a twofold process: (a) Increased blood destruction, and, (b) Diminished blood formation. The determination of the part played by each of these opposite processes in the individual case furnishes a more or less accurate index of the severity, the prognosis and the treatment. The patient, for example, in whom the process of destruction is greater than that of regeneration, offers a graver prognosis than the one in whom they are advancing *pari passu*. In order to ascertain the extent of these two processes, it is necessary to conduct a thorough laboratory and clinical examination. The determination of the extent of the process of regeneration, or, in other words, the bone marrow activity, involves a consideration of the following factors:

1. *Red Cells:* The red count is markedly reduced in pernicious anemia, the average count being under 2,000,000. The red cells, in stained

smears, show striking variations in shape and size (poikilocytosis and anisocytosis) and this is one of the most pathognomonic features of the disease. A certain proportion of the cells take the basic stain—so-called polychromatophilia—and there is usually a variable degree of stippling. Whether stippling is an index of regeneration or of degeneration is a matter of dispute among hematologists, but the weight of present-day opinion favors the former. Nucleated red cells vary in number with the individual case and with different periods in the disease. In the majority of instances their presence is of favorable import, and, after a so-called blast crisis during which the nucleated cells may rise to 10,000-14,000, a permanent gain in the blood count may result. In general, the presence of nucleated cells means that the bone marrow is making an earnest endeavor to manufacture new blood. Transfusion will often result in an increase of these cells, and, in such instances, one is entitled to the assumption that there is active marrow present.

There are cases, however, in which a blast crisis occurs as a preterminal or terminal event. Here their presence is due to a change in the threshold of output from the bone marrow, and is not due to marrow stimulation. The differentiation between these two conditions is usually not difficult, if one takes into consideration the state of the other elements, especially the white cell and the platelets.

The reticulated cells furnish a very trustworthy idea of marrow activity in this disease. Inasmuch as their threshold of output is not so high as that of the nucleated cells, an increase in their numbers will oftentimes be the only evidence, on the part of the red cells, of marrow activity. Repeated observations on the state of reticulated cells are particularly valuable in indicating the efficacy or inefficacy of therapeutic procedures. The persistent absence of these cells, in spite of transfusion and other measures, is of bad prognostic import.

2. *White Cells*: A leucopenia is the rule in pernicious anemia, and the white count furnishes a fair idea of marrow activity. The lower the count, the more severe the disease, and vice versa. Transfusion and splenectomy result in an increase in these cells, in favorable cases. The reduction in white cells occurs at the expense of the polynuclear leucocytes, the lymphocytes remaining

about normal. The differential count, therefore, will show a relative lymphocytosis, the extent of which is roughly proportional to the severity of the case. In very severe cases the percentage of lymphocytes may mount to 70 or 90. Cases which are on the upgrade will display a progressive rise in the percentage of leucocytes.

3. *Blood Platelets*: Since primary anemia is characterized by a depression of the bone marrow as a whole, the blood platelets are also affected. In fact, the paucity of platelets is one of the most valuable differential signs between primary anemia and certain long-standing secondary anemias, which give a blood picture in many respects similar. To one who has formed the habit of subjecting the blood platelets to careful scrutiny, there are often manifest certain other characteristics, especially in size, which are not seen in normal blood. From a prognostic standpoint, an increase in platelets has the same significance as an increase in the white cells. A platelet increase is one of the first signs of bone marrow stimulation following transfusion.

The foregoing are the main factors which must be considered in all determinations of the functional state of the bone marrow. The determination of the rate of blood destruction is more inaccurate, depending as it does on clinical, rather than upon laboratory, investigations. There are, however, three fairly accurate bits of evidence which warrant the assumption that the red cells, at least, are undergoing an abnormal rate of destruction. They are:

1. A steady and otherwise inexplicable temperature of 99-101°. This is best explained as a protein fever, due to the presence in the circulation of the products of disintegrated blood cells.

2. An icteric tint of the sclera, and an icteric tint of the skin, which is quite distinct from the lemon yellow color described in text-books.

3. Splenic enlargement of mild degree. The spleen is the graveyard to which the red cells go after they have outlived their usefulness. Here they are destroyed and their decomposition products, particularly the pigment, is made available for further use in the body. That the spleen can at times play a pathologically active part in blood destruction is evidenced by the phenomena observed in hemolytic jaundice, where there is rapid blood destruction which is obviated by splenectomy. In those cases of pernicious anemia, which

are characterized by a temperature and an icteric skin, there is an abnormal splenic activity, as evidenced by the prompt remission which follows splenectomy. The enlargement in such cases may be interpreted as a work hypertrophy and is not due to fibrotic changes, as in Banti's disease. It is in these cases, and in these alone, that splenectomy is justified as a therapeutic procedure. The determination of the urobilinogen content of the stools affords an accurate index of the rate of blood destruction, but involves a technique which is too elaborate for ordinary application.

So much for the laboratory findings in cases of pernicious anemia. Before taking up the questions of prognosis and treatment there are certain clinical features which have an important bearing upon the differential diagnosis. There are present, in most cases, four features which are valuable aids in the differentiation between this disease and certain similar conditions. 1. A history of similar attacks, followed by a remission. By careful questioning, one is able to elicit this important bit of information in many cases. 2. The history of or the presence of sore tongue—a characteristic finding and one which has not received due recognition. 3. The occurrence of certain nervous phenomena, particularly numbness and tingling in the extremities. These signify a degenerative process in the spinal cord and are precursors of the more exaggerated spinal cord disturbances which affect the posterior columns in particular. Cases have been reported in which these neurological findings precede any marked changes in the blood. 4. Achylia Gastrica, with its resultant gastro-intestinal disturbances. The importance of this finding, as well as the history of sore tongue, is emphasized by the following case:

Mr. D., aged 41 years, was referred Oct. 8, 1919, for investigation of his gastro-intestinal tract. He gave a history of intermittent attacks of diarrhea of 1-3 weeks' duration, over a period of two years. There had been no other symptoms beyond vague sensation of heaviness P. C., and there had been no appreciable loss of weight or strength. Several months before being seen, he had noticed that his tongue was sore. He was not particularly pale, and the general physical examination was negative. Fractional test meal revealed complete absence of free HCl. Thus far, the history and findings are characteristic of achylia gastrica. His family physician was so informed, with the reservation, however, that before making a final diagnosis of simple or primary achylia gastrica it would be necessary to rule out pernicious anemia. A blood

examination the next day revealed a very typical incipient pernicious anemia, with a red count of 3,528,000, a white count of 6,000, and a stained smear which showed Neutrophils 67%, Lymphocytes 26%, Eosinophils 4% and Transitionals 3%. Platelets were definitely decreased. There was a moderate variation in size and shape, with a few large oval cells. Color index was 1.2. Thus the presence of achylia gastrica, and the history of sore tongue, led to the discovery of early primary anemia, in the first attack.

DIFFERENTIAL DIAGNOSIS

The following conditions are entitled to consideration in the differential diagnosis:

Late Secondary Anemia: In certain long-standing cases of secondary anemia, there occurs as a result of repeated marrow stimulation a condition of bone marrow exhaustion. In such instances, the blood picture may resemble very closely that of primary anemia, a fact which is not surprising when we pause to consider that there is in both instances a depleted marrow. A careful study will usually reveal several incompatibilities. In these late secondary forms the color index will tend to remain lower. There will be a higher relative proportion of leucocytes, and, most important of all, a larger number of platelets than one would expect in a primary anemia of equal severity. A painstaking review of the history and a consideration of the possible etiological factors will oftentimes put one on the right track. A symptomless carcinoma, especially of the gastro-intestinal tract, will sometimes produce a confusing anemia, and, in some clinics, every case of grave anemia is subjected to a thorough x-ray investigation for this very reason. Syphilis can produce grave anemia, and a Wassermann reaction should never be neglected. Various protozoal affections of the intestines, notably those due to *Bothriocephalus latus* and to Hookworm, are possibilities. Tuberculosis is not supposed to produce an anemia sufficiently severe to resemble a primary anemia. However, in a case recently seen, there was no other evident cause.

Aplastic Anemia: This term should be reserved for an acute anemia of unknown etiology, which terminates fatally after a rapid course of three to six weeks. There is no evidence either of blood destruction or of blood regeneration. The red cells show no variation in size or shape, and the almost complete absence of platelets, stippling, polychromatophilia and reticulated cells, coupled with the high relative lymphocy-

tosis, show that there is a complete inhibition of blood formation. Certain late cases of pernicious anemia, which have reached the stage of bone marrow exhaustion, may present a very similar picture. However, there will always be a tendency to variation in size and shape, and the usual tendency to very large cells. The history of remission, of sore tongue and of nervous disorders, is particularly valuable as a differential point.

Splenic Anemia: By the time the anemia in this disease has reached the stage where it may resemble true primary anemia, the size of the spleen is usually such that the differential diagnosis offers no difficulty.

Bone Marrow Tumors: A primary or metastatic marrow tumor may rarely give rise to confusion. Frequently a careful search will reveal the presence of abnormal cells—young marrow cells, as a result of marrow irritation. The presence of Bence-Jones protein in the urine and Roentgen examination of the bones, may possibly result in positive findings.

Non-Leukemic Phase of Leukemia: Certain cases of lymphatic leukemia, in which the tumor cells are confined largely to the bone marrow, show an anemia of varying degree. The anemia in these cases, as in the rare cases of primary or metastatic tumor mentioned above, is due to the crowding out of the normal marrow cells by the tumor cells. The degree of anemia will depend on the amount of normal marrow left. There is, in some cases, evidence of active marrow, i. e., reticulated cells, blasts, etc., and a variable degree of variation in size and shape. In differentiating the two conditions, the presence of enlarged lymph nodes is an important factor. Furthermore, there will oftentimes be a much higher percentage of lymphocytes in case of leukemia. The number of lymphocytes may be too small to warrant the diagnosis of leukemia, without taking the above factors into consideration.

Purpura Hemorrhagica: Those cases of pernicious anemia which have reached such a low ebb that the platelets are reduced below 60,000, and in which bleeding occurs, may simulate this disease. The differentiation will be considered below, under the heading of purpura hemorrhagica.

PROGNOSIS

The prognosis as to cure is absolutely bad, and practically all cases eventually succumb, regard-

less of the treatment employed. Cases living longer than five years are the exception. Cabot, in a review of 1,200 cases, has collected 37 cases which lasted more than four years; three of these lasted fourteen years, and six cases he considered as definitely recovered. Few cases die in the first attack, remissions being one of the characteristics of the disease.

Statistics as to the number of remissions vary. Of 524 cases in Cabot's series, 296 had one remission, 118 two, 65 three, 21 four, and 24 five. The duration of these remissions varied from three months to four years. Stockton has recently reported a remission of twenty years' duration, during which the blood picture returned to normal and the only feature of the disease which persisted was the achylia gastrica. It is the exception, rather than the rule, for the blood picture to return to an absolute normal during a remission, and no one has ever reported a return of HC1 once it has been absent.

The prognosis in a given case can be made by a careful determination of the state of the bone marrow and the presence or absence of marked destruction. This is done by a consideration of the factors enumerated above. It is well to defer the prognosis in a given case until one has observed the effects of treatment. There are cases, at first glance stationary, which respond to transfusion by a shower of newly formed elements and go on to a complete remission. One should watch the result of two or three transfusions before venturing a final prognosis.

TREATMENT

The gloomy ultimate outlook in these cases should not deter one from making every effort to treat them. The frequent tendency to use expectant treatment alone is to be deprecated. There is no case so aplastic but that it may be helped by appropriate therapy, and it is not fair to give up hopes of inducing a remission until a thorough therapeutic test has demonstrated the futility of treatment. Arsenic, in one form or another, has been the sheet anchor in these cases up to a few years ago. While it has its beneficial effects, its action is so slow that in most cases it is difficult to determine whether the improvement should be credited to the drug or whether it is to be explained on the basis of a spontaneous remission.

There are cases, however, in which arsenic-

therapy may produce excellent results. This is illustrated by the following case:

Mrs. L., aged 50 years, came in Oct. 20, 1919, complaining of pallor, weakness, sore tongue and tingling of extremities of six months' duration. A definite icteric tint to the skin, and a temperature of 100-101° were evidence of blood destruction. Blood examination on Oct. 20, showed a R. C. of 1,024,000, W. C. of 6,400, and Hgb. of 40%. Platelets and reticulated cells were absent. Because of the difficulty of procuring a suitable donor, she was given several injections of neo-arsphenamine, .15 gram each. Nov. 11, 1919, her R. C. was 1,952,000, Hgb. 58%, reticulated cells 15%, and platelets markedly increased. The W. C. was not affected, but the proportion of leucocytes was increased. She exhibited marked clinical improvement, notably an increase in strength, and a diminution in the paresthesia, which had been particularly troublesome. The Wassermann reaction in this case was negative.

We have, in transfusion of human blood, the bone marrow stimulant par excellence, and there is no doubt that this procedure, properly performed, is of distinct value. The beneficial effects of transfusion vary in their intensity with the individual case. In the milder cases in which there remains a goodly amount of functioning bone marrow, it is possible to induce a complete remission. In such cases, there is a marked and persistent increase in the formed elements of the blood. In those cases in which there is very little active bone marrow left, transfusion serves one purpose only, that of filling up the circulation with new blood. In such instances, it is possible to prolong life for a variable period of time. I have in mind a case of a man of 46 years, who exhibited practically no bone marrow activity, yet who came into the hospital at one or two-month intervals for what he termed a "blood cocktail" over a long period of time.

The method of transfusion varies with the preference of the operator. There is no apparent difference, as far as end results are concerned, between the citrate method and the various methods which dispense with the use of anti-coagulants. While the former has the advantage of simplicity, it has the disadvantage of producing more reactions. *A priori*, it would seem that the ideal method would be one in which the blood remains outside of the body for the shortest possible time, and in which there is no admixture of other substances. The syringe cannula method meets both of these requirements better than any

other method of indirect transfusion. There is no consensus of opinion as to the optimum amount of blood to be used. Five to seven hundred cc. would be the average. Larger amounts have been known to produce untoward results in some cases.

The result of transfusion should be checked up by laboratory examinations, especially in those cases where repeated transfusions are necessary. An attempt should be made to transfuse when the patient is on the down grade. It would not seem advisable to transfuse at a time when the laboratory findings indicate that the bone marrow is working to the limit of its capacity. It goes without saying that every transfusion should be preceded by an agglutination test to determine the compatibility or incompatibility of the two bloods.

Splenectomy has only a limited value in pernicious anemia. The wave of enthusiasm which resulted in the removal of many spleens a few years ago has passed. In cases where there is evidence of increased blood destruction this operation has a definite value. In the majority of cases, however, there is no evidence of any very extensive blood destruction, and here splenectomy is valueless. Indiscriminate splenectomy, therefore, is to be condemned.

There remain two disorders of the bone marrow which, although comparatively uncommon, are of sufficient interest to warrant a brief consideration. They are purpura hemorrhagica and hemophilia. In each of these the blood platelets are primarily affected, and the other elements only secondarily. This is in marked distinction to primary anemia, where all the elements are affected primarily and simultaneously.

Purpura hemorrhagica is a condition characterized by hemorrhages from the skin and mucous membranes. It may run an acute course with rapidly fatal termination, or it may be chronic with intermissions over a period of years. It is a distinct disease entity, with more or less characteristic laboratory findings, and is not to be confused with purpura rheumatica, purpura simplex or the various drug and toxic purpuras. It shows the following characteristics:

1. Diminution of the Blood Platelets: The blood platelets, which number 250,000 to 400,000 under normal conditions, are reduced and should they fall to a point below 60,000, bleeding will occur. The blood picture, in a typical case, will

show all the characteristics of secondary anemia, with the exception of the platelet increase. There will be a tendency to achromia, a low color index, a very slight variation in size and an increase in the reticulated cells, and a leucocytosis. Such a picture shows no evidence of faulty formation of red and white cells. In long-standing cases, however, the bone marrow, after prolonged stimulation, becomes exhausted and there occurs a reduction of varying degree in red and white cells, sufficiently marked in some cases to simulate aplastic anemia.

2. Prolonged Bleeding Time: The bleeding time is determined by pricking the ear with a needle, and taking up the blood at regular intervals with a piece of blotting paper. Normally, bleeding will stop in three minutes. In purpura hemorrhagica the bleeding time may be prolonged many times the normal. According to Minot, it will be forty-five minutes when the platelets are 20,000.

3. The coagulation time is either normal or slightly delayed. This time is determined by collecting in a small test tube one cc. of blood obtained by vene puncture. The tube is inverted at one minute intervals, and the point at which the blood ceases to flow out is taken as the end point. In normal blood, this occurs at the end of 5-10 minutes. In cases of purpura hemorrhagica, while making this test there occurs a very characteristic phenomenon—the failure of the clot to retract. The familiar retraction from the sides of the tube, so often seen when taking blood for Wassermann tests, etc., is not present in these cases.

We may recapitulate by saying that purpura hemorrhagica is a disease in which the blood platelets are primarily affected and the other elements only secondarily, characterized by a long bleeding time and a normal coagulation time, a non-retractile clot, and a tendency to bleed from the skin and mucous membranes.

There is a secondary form of purpura hemorrhagica in which the same symptoms occur, and in which the laboratory findings parallel those enumerated above. This form occurs late in the course of pernicious anemia, in aplastic anemia, in the leukemic and aleukemic phases of lymphatic leukemia, and sometimes in bone marrow tumors. In such instances, the sequence of events is first an anemia due to involvement of the red

and white cells, with a secondary involvement of the platelets which occurs late in the course of the disease and leads to bleeding. In true primary purpura hemorrhagica, on the other hand, there is first of all a platelet decrease, then bleeding and a resultant anemia. The distinction is at times very difficult and rests upon a careful review of the sequence of events in the clinical course, and a painstaking scrutiny of the laboratory findings.

Hemophilia: Hemophilia differs from purpura hemorrhagica in that it is a hereditary disease, and is characterized by bleeding into the deeper tissues, including the joints. After trauma, operations, etc., the bleeding may occur from any part of the body. It is now an accepted fact that this disorder is found only in males, being transmitted through the female. Those cases which have been reported as occurring in the female were in all probability cases of chronic purpura hemorrhagica.

From a laboratory standpoint the characteristic features are as follows: 1. Prolonged coagulation time, with normal bleeding time, or the reverse of what occurs in purpura. 2. Normal numbers of blood platelets. There are many views as to the exact nature of the disease, and all of the coagulating principles of the blood have been indicted at one time or another. Minot and Lee, after a careful survey of the existing theories, undertook a careful study of the blood platelets in three cases. They were able to show quite conclusively that hemophilic platelets did not behave as normal platelets, and concluded that the disease is due to a hereditary defect in the platelets which consists in a slow availability for coagulation. Coagulation depends on the ability of the platelets to form thrombin by going into solution and the platelets in hemophilia are abnormally resistant in this regard.

In conclusion, it may be said that this paper represents an attempt to review certain blood disorders by considering the pathology of the individual formed elements of the blood.

"Are you of the opinion, James," asked a slim-looking man of his companion "that Dr. Smith's medicine does any good?"

"Not unless you follow the directions."

"What are the directions?"

"Keep the bottle tightly corked."—*Exchange.*

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JULY, 1920

Editorial

CHRISTIAN SCIENTISTS ROUT THE DOCTORS.

The Constitutional Convention June 29th at a hearing before the Committee of the Whole turned down proposition 300.

The Christian Scientists while numerically in-

significant were nevertheless very active. They maintained a lobby at Springfield since the convention convened last December. The medical profession would profit materially by imitating the political activities of the Christian Scientists.

THE PASSING OF DR. ALEXANDER LAMBERT

To point out the shortcomings and mistakes of Dr. Alexander Lambert during his term as president of the A. M. A. is a facile task. These errors are considered abundant and glaring. To the ethical eye the good doctor would seem not to have been animated by proper regard for the future of medicine in the United States; to have succeeded in stamping himself indelibly on the minds of the physicians of America as a man lacking all interest in the welfare of the medical profession and as an individual who has not used his official position impersonally for the welfare of the profession.

Seeking a good word to say for Satan, a kindly Scotch woman remarked, "Ye canna deny that he's verra industrious."

This much may be conceded Dr. Lambert. But is any excuse necessary for holding that as an A. M. A. executive Dr. Lambert's industry was at all times exercised in the wrong direction?

Throughout his A. M. A. term of office, Dr. Lambert's attitude—considered by many to have shown utter disregard for the welfare of his profession—was most disastrous. Caligula wished that the Roman people had but one neck that might be slashed at a single stroke. It is fortunate that the medical profession does not have a single neck.

For the official career of Dr. Lambert was typical of that of evasive politicians. This group feels, evidently, that if they "can't fool all the people all the time," at least they may hope to "fool some of the people all the time," and "all of the people some of the time."

Since the creation, many a fool has fallen into the slime of disgrace when he missed his step, because, "inebriated with the exuberance of his own verbosity," and egotistical imagination, monumental conceit, towering ambition, and overbearing disposition, ruthless sacrifice of the ties of friendship, gratitude, and reverence, de-

votion to a disposition to bully and to browbeat, linked with greed for power, he has been made foolishly vulnerable to flattery and led into strange and undependable companionship! Alexander Lambert is no fool, but some of his actions are inconsistent with supreme wisdom.

Here is the proof of it.

The Council on Health and Public Instruction, on the recommendation of Dr. Lambert, appointed a subcommittee to study and to report on "Social Insurance." For this subcommittee, Dr. Lambert was made chairman. He was authorized to employ "an executive secretary."

A man competent, broad-minded and unbiased should have had this job.

Whom did Dr. Lambert employ?

His choice fell upon I. M. Rubinow. Now Mr. Rubinow is said to be of Russian birth and socialistic tendencies. He is a statistician. On his own testimony Rubinow for fifteen years has been an advocate of "Compulsory Health Insurance." Dr. Lambert merely packed the jury and made sure of the verdict. Read Rubinow's books and learn the contempt in which this person holds the rank and file of the medical profession. Throughout Rubinow's writings it is apparent that he would, if he could, accord the rank and file, of the medical profession in America the treatment accorded to him and his forbears in aristocratic Russia. Rubinow's actions were so offensive that the Council on Health and Public Instruction saw fit at the end of a year to dispense with his services. Immediately Rubinow was picked up by the American Association for Labor Legislation, and put on its payroll. From a propaganda standpoint this scheme hit the bull's eye. Pamphlets written previously by Rubinow and Dr. Lambert continued in circulation, clothed apparently in all the authority of a paid executive secretary of the A. M. A. With "Dr. Lambert, president of the A. M. A.," and "Mr. Rubinow, paid expert," appearing as officers of the Association for Labor Legislation, it is natural that the opinion prevailed that the American Medical Association was backing "Compulsory Health Insurance." Is further evidence needed to show that before an argument could be made, the cards were stacked against those who disapprove of "social insurance" and dread its abuses? Appointment of I. M. Rubinow as executive secretary of the committee

for impartial study and report on Compulsory Health Insurance, can be regarded only as a breach of good faith on the part of the chairman of the committee. Dr. Lambert selected Rubinow for this position and that for approximately 10 years Rubinow had been an enthusiastic advocate of "Compulsory Health Insurance" was well known to Alexander Lambert.

It is open to question whether history cites a more brazen betrayal of a fraternity by its chosen leader. As president of the A. M. A., Dr. Lambert straddled two stools. He had been placed at the head of his profession's most elect body. Synchronously Dr. Lambert permitted himself to be made an executive officer of the American Association for Labor Legislation. Extremes met right then and there. The father of all Compulsory Health Insurance legislation is the American Association for Labor Legislation. In this dual capacity Dr. Lambert appeared April 15, 1920, in Albany, N. Y., for the hearing of the notorious Cotillo bill. He was heralded duly as the president of the great A. M. A., and endeavored undoubtedly to convey the impression that through himself the A. M. A. was speaking. Mention must be made, also, of the fact that though the armistice had been signed eighteen months previously Dr. Lambert came into the hearing garbed as an officer of the American Red Cross and patently proud of his effective attire.

Dr. Lambert managed to put the medical profession in a very embarrassing position. At the meeting referred to, Dr. Lambert opposed openly the members of his own state society, for the great majority of the members of the New York State Medical Society were on record condemning the general scheme for which Dr. Lambert stepped out in open championship. Consequently this action on the part of the A. M. A. chief executive placed the great medical profession in the ridiculous predicament of a house divided against itself, with the chosen leader fighting for one principle, and the rank and file for its very antithesis. And so, alone and unaided, Dr. Alexander Lambert, humiliated the medical fraternity of the whole country.

Once again it is noted with shame that the president of the A. M. A., Dr. Alexander Lambert, is persistently reported to be interested in the notorious "Towne's—Lambert Drug and

Booze Cure Sanitarium," although we are told Lambert denies financial connection with it. The campaign of publicity through the lay press promoting this institution is alleged to have borne also, and invariably, a booster campaign for Alexander Lambert, himself. Was this a dignified procedure for the president of the A. M. A.? To be accurate, was it ethical? Or was it honest, dignified or ethical for Dr. Lambert to espouse the cause of the notorious Cotillo anti-drug bill, presented for passage before the New York State legislature and aimed against physicians, and in the behalf of drug addict institutions?

In the face of these treacheries, the medical profession has good reason to be grateful to the House of Delegates of the American Medical Association. Through their representatives in the national convention at New Orleans, this body performed a service of value for the doctors of the United States. To the throbbing ambition of the retiring president of the A. M. A., those kindly delegates applied the healing poultice of defeat. This Lambertian ambition, by its chronically inflamed condition, had contributed materially to Dr. Lambert's unfitness for the important task of heading a fraternity, that had been entrusted to him by his indulgent brothers in medicine.

While all this was happening to the profession, what was happening to Dr. Lambert? Apparently the good doctor was working along a path of personal obsession. A casual judgment, passed from a review of his actions, indicates that his fixed idea was the upbuilding of a gigantic personal political machine to enhance effectively his pet schemes and dreams. Further, that seemingly his ideal of medical service to the profession means the maximum of power laid in the hands of the president of the medical fraternity and the maximum of spoils to that president's political henchmen. Expert in stuffing doctors with the husks of false issues made palatable with promises, Dr. Lambert would seem to have conjured visions of his expanding authority in state and nation, while neglecting his opportunities for constructive medical labor.

Megalomania in office is a grievous malady. After all, officers are chosen, not for their own glory, nor for the purpose of taking the necks of their electors as mere stepping stones for

higher places. Rather a man is made an executive so that he may obtain service through a succession of honest efforts, intelligently directed. Evil indeed is the influence of medical executives who neglect the interests of the rank and file in order to serve their own ends at the expense of the profession as a whole.

Such a course constitutes a shameful travesty on popular government. An indifference that breeds toleration for such a state of affairs is a reproach to medical men of repute and a peril to their democratic organization.

With rare wisdom the American Medical Association, through its House of Delegates at New Orleans, turned its back on Dr. Alexander Lambert. This action should arouse the good doctor from his feverish mirage of broad political power. Whether his awakening is possible, may be doubted, seriously. But it is not so important, after all. Medical men and women should lavish their thanks upon the sagacious delegates who squelched a misrepresentation of inestimable evil influence, as they struck a blow for decency and fair dealing from officers of the A. M. A.

SHOULD EPILEPTICS MARRY?

IS ESSENTIAL EPILEPSY HEREDITARY?

In *Le Presse Medicale*, Vol. XXVIII, No. 6, in an article read before the Societe de Medecine de Paris, Hartenberg answers this question in the negative. In 80 cases investigated, three showed epilepsy in the ancestors. It is somehow acquired and is casual or accidental, and should not be regarded as incurable. Tellemer in discussing the paper conceded the rarity of epilepsy in the patient's ancestors, but his own experience showed that if epileptics marry, their children seem tainted in some way. Laignel-Lavastine cited Pierre Marie, Babinski, Comby and himself as not believing in the heredity of idiopathic epilepsy. This means that epilepsy is not a disease, but a syndrome. Blind agreed with the other speakers and gave as his belief that the Scandinavian laws forbidding the marriage of epileptics are unjust.

While we are willing to admit that epilepsy can scarcely be considered a distinct disease and that it is a syndrome of nervous and mental symptoms appearing under a variety of pathological states, we believe it is wrong to permit

the marriage of epileptics for the reason that heredity plays a very important part in causation. It appears frequently in succeeding generations, and may descend directly from parents to children, but is more likely to be indirectly propagated by way of collateral branches. The heredity is most often manifested by transformation from other neuropsychic diseases. For instance, hysteria, epilepsy, and idiocy may follow in successive generations. Epilepsy among cousins is shown to be more frequent than among brothers and sisters, where various neuropathic equivalents are frequently encountered. American authorities hold that consanguinity plays no part unless it brings together individuals of similar nervous or mental defect.

THE NUMERICAL STRENGTH OF CHRISTIAN SCIENCE

The strength of Christian Science in America may prove as great a conundrum as the age long mystery "how old is Ann?" True, the few who profess a belief in this theory are very noisy and active. But that the association is numerically strong is ridiculous to presume. Activities of the followers of Mrs. Eddy reminds us of the story of the man who made a bargain for the sale of a million frogs. Finally he proffered only ten frogs. When asked why he did not deliver the remainder he remarked "ten is all I have." "But," said the purchaser, "you told me you had a million." To this the frog owner replied "I judged so because of the noise they made."

Regarding the strength of the Christian Science Church in America the following is of interest: The Census' Bureau report on religious bodies in the United States is dated 1916, but was published in 1919. The letter of transmittal from Sam L. Rogers, Director of Census, to William C. Redfield, secretary of Commerce, is dated February 28, 1919.

On page 14, it says: "the total number of denominations listed in this report is 202. The Church of Christ (Scientists) refused to furnish any statistics and, although a few individual organizations responded, it was decided to omit the body from the list of denominations."

The head of one of the great protestant churches of Illinois recently called our attention to these facts: That Chicago is at present the stronghold of the Christian Science Church;

That in Chicago the organization has 16 churches or meeting places; that not one of the meeting places will seat a thousand persons; That most of them will not accommodate over 200. Allowing 1,000 for each unit mentioned, a number which we believe is very liberal, one can readily figure out the strength of the cult in Chicago or, for that matter, in Illinois.

We might add that some time since Christian Science in America passed the Zenith. Today "The Great Error is numerically tobogganing downward very rapidly.

However, the Eddyites make up in activity what they lack in number. They maintain the most efficient and best-oiled political lobby to be found anywhere. Their representatives attend every session of the state legislature and scrutinize every syllable of proposed legislation offered; and should any lurking danger to Eddyism be suspected, the members of the legislature are bombarded by mail, telegraph and in person until the average politician is convinced that the volume of frog blast reaching him could issue from no fewer than one million throats.

No small part of the Christian Science political strategy lies in concealing their real numerical strength. In reality, more voters are confined within the walls of the state insane hospital than attend the insane orgies of this misnamed cult.

How long will the sane and wholesome public of Illinois permit this million-frog noise to dictate all medical laws?

ACTION ON PROPOSITION 300 BY CONSTITUTIONAL CONVENTION, JUNE 29, 1920

Proposition 300 came up as first order of business in convention proper this morning (June 29th) at 9:30 o'clock.

Mr. Green (Urbana) called attention to the fact that this proposition, unlike any other coming out of committee to floor of convention, comes without recommendation, and as member of Committee on Rules and Procedure, offered a motion in order to bring the matter properly before the convention, that the proposition be not concurred in.

Mr. Sutherland (Chicago) offered as an amendment the following to be added to Mr. Green's motion "and that it shall not become a part of the constitution."

Mr. Lohman asked that the proposition be given a hearing and pointed out that Mr. O'Brien, chairman of the Committee on Miscellany, which committee had the proposition before it, was now in San Francisco attending the Democratic convention, and that others interested in the matter also were absent.

Mr. Sutherland then stated that the proposition had no backing and no support from the committee.

Dr. Coolley objected to Mr. Sutherland's statement and pointed out that the proposition did have backing and support and that the committee was of the opinion that it was a matter of such importance that it should be debated on the floor of the convention.

Mr. Green then stated that his motion was merely for the purpose of bringing the matter before the convention and to afford debate.

Dr. Coolley then proceeded to open the debate, speaking from manuscript in behalf of the measure.

Dr. Whitman followed with an argument against the proposition, speaking a part of the time from manuscript.

Mr. Taff (Fulton county) opposed the proposition on the ground that its provisions were so sweeping as to prohibit the practice of dentistry, pharmacy, nursing and midwifery by any other than a person who was able to meet the *one* standard for treatment of the sick.

Mr. Sutherland then spoke briefly against the proposition.

Dr. Coolley made a further plea for the principle of the proposition, pointing out the absolute necessity of having properly qualified persons in attendance on the sick, in order that communicable diseases might be properly diagnosed, early detected and effectively quarantined to protect the public health, *all* persons authorized to attend the sick should be so qualified.

Mr. Wilson (Chicago) then presented a petition signed by a considerable number of persons asking amendment to home rule proposition, making it clear that any degree of home rule granted would not include the right to regulate the practice of medicine, etc.

A *large* number (probably 50) of the delegates then filed petitions (apparently offered by Christian Scientists of their respective districts) asking defeat of the measure.

Dr. Coolley then warned the convention not to

be moved by the filing of these petitions, saying that those supporting the proposition, had they so elected, could have swamped the convention with petitions.

On call of the previous question, the president stated the question, and on putting the motion, the ayes (supporting the Sutherland amendment) won, only a few feeble noes being heard.

The question then was on the amended motion of Mr. Green, and on this the roll was called on the demand of Dr. Whitman, which demand was supported by five other members.

Mr. Green's motion prevailed, the vote being 57 ayes, 9 noes. The proposition was then declared rejected.

NOTES

The following members voted in support of proposition 300: Brenholt (Alton), Coolley (Danville), Dryer (Hillsboro), Goodyear (Watseka), Lindley (Greenville), Lohman (Chicago), Smith (Stockton), Trautman (East St. Louis), Warren (Leland).

Ex-Governor Fifer (Bloomington) was present but did not vote.

Michaelson (Chicago) was present but did not hear him vote.

David Shanahan (Chicago) reported to Dr. McManus, who was here from Cairo representing Dr. Grinstead, that he had three letters from Chicago physicians, of which two were against and one for the proposition.

Every delegate had scores of letters and telegrams from Christian Scientists.

HEALTH INSURANCE PROPAGANDA NOT DEAD

The unanimous condemnation of Health Insurance by the American Medical Association at New Orleans does not indicate that the subject is worthy of no further attention from the medical profession. We showed in our last issue that substitutes even worse than the original scheme are being extensively propagandized at the present time. In New York State several bills equally visionary and some more vicious have already been put forward; it behooves the profession to be alert to dangerous legislation.

The latest scheme on the part of the A. A. L. L. pirate crew is to try and interest the ministry in their destructive propaganda. As illustrative of what is going on we are in receipt of

the following under date of June 10, 1920, from Dr. Eden V. Delphely, New York.

To the Editor:—I have been very busy in endeavoring to keep the "Federated Council of the Churches of Christ in America" from going over, "hook, line and sinker," to the side of the "social insurance" alias "Compulsory Health Insurance." We have had two conferences on the subject. At the first one our side was represented by Dr. J. J. A. O'Reilly, of Brooklyn, and myself. The proponents were represented by the executive secretary of the A. A. L. L., Prof. Chamberlain of Columbia University (his professorship is that of law drafting—not a very serious professorship), Mr. John A. Lapp of your city, and Dr. Louis I. Harris of the N. Y. Department of Health.

NOTE:—From several sources our attention has been called to the personnel of the propagandists in this country of Health Insurance and allied schemes. One phase of this subject we consider alarming. It is this: that several of the staunchest advocates of these dangerous doctrines are Russians inoculated with the soviet government bug. Likewise a number of them have deemed it wise or expedient to shorten materially or even change the spelling of their names. It has also been reported that one of them was connected with the notorious "Rand School" (New York) which was raided by the Federal Government some time ago as being in league with the anarchists, bolsheviks, etc. It seems to us that it is about time for real Americans to wake up, get busy and help guard American institutions.

DISCRETIONARY POWERS IN OFFICIALS MUST BE CURBED

Ex-Justice of the United States Supreme Court and former Republican candidate for President warns of ruthless rule. He fears the abuse of power by government.

At the Wellesley College commencement exercises June 14, 1920, he used the following language:

That in an appreciation of the difficulties which have accompanied the period after the war we must avoid a distorted view and we must not fail to realize that the great heart of the nation has not changed in a few months.

We have talked so much of free institutions that

we are apt to think that in this country they will take care of themselves. Our recent and current experiences should disabuse us of this notion.

We have too many evidences of a readiness to take advantage of opportunity to establish autocratic administration. The east with which abuses have arisen and have been condoned should give us more anxiety than wild utterances which easily defeat themselves. The tendency to crave and assert arbitrary power, to use power either economic or political power—ruthlessly is more apparent with us than devotion to the cause of liberty.

It is in the orderly processes of constitutional government, that is, a government of law—with power so adjusted as to secure protection from capricious and arbitrary action—in the putting of principles and rules sanctioned by the people in the place of tyranny that we find the security of liberty. Whoever seeks to subvert these orderly processes is the enemy against whom at once the entire power of organized society should be directed.

There is, however, a great difference between protecting the orderly processes of government and the attempt to repress political opinion with which we do not agree.

The practice of putting large discretionary powers at the disposal of officers needs a curb. The patriot in peace demands government upon established principles, and he should always be ready to contest officialism and bureaucracy, with its readiness to suppress individual freedom by capricious administrative action and to install in departments of a supposed free government what is nothing short of a reign of terror.

NEW JERSEY REJECTS ANNUAL RE- REGISTRATION SCHEME

At the annual meeting of the New Jersey State Medical Society in June the scheme for annual registration for physicians, sponsored and pushed by the trustees of the State Society, was beaten by the House of Delegates and voted down and out. Good work, eh!

NOTE:—We are in receipt of the above information from one of the officers of the State Society. He claims they were able to bring about this ideal result because of information furnished him by physicians in Illinois. The sooner the profession of the country wake up to the fact that this scheme amounts to annual confiscation of licenses rather than re-registration the better it will be for all concerned. Why should physicians endorse this proposition when it means that their right to earn a living is at all times subject to the whims of some cheap politician who is almost invariably a layman.

A LIFE CUT SHORT BY PROHIBITION

It is reported in *The Sun and Herald* that Thomas Morris, of Grand Island, Neb., died there recently at the age of 126 years. It is asserted that the statement as to his age is absolutely authenticated by the old family Bible which contains the record of his birth in North Wales on January 15, 1794. His death is attributed to the fact that he was no longer able to get his daily modicum of whisky.

BUREAUCRACY, HEALTH INSURANCE, STATE MEDICINE, ET AL.

We have been trying for some time to show the sort of medical efficiency people would experience under health insurance, state medicine and other bolshevik schemes, all of which are administered by a bureaucratic system of government.

Here is Franklin K. Lane's characterization of the faults and shortcomings of bureaucracy in his farewell report as Secretary of the Interior:

Mr. Lane's indictment of official Washington emphasized the paralyzing effects of red tape, stereotyped routine and lack of courage in officials who feel themselves amply protected by the diffusion of responsibility. He alluded, incidentally, to the ever-present thought of furthering partisan purposes. In commenting on Mr. Lane's "bombshell" David Lawrence affirms in a dispatch to *The Daily News* that observers in Washington are disposed to put much more stress than Mr. Lane did on politics as a potent cause of inefficiency and waste in the national service.

There is, says Mr. Lawrence, too much politics in the atmosphere of congress, of the departments and of the white house. For example, in the department of justice, according to Mr. Lawrence, subordinates of the attorney general are working tooth and nail in the interest of their chief for delegates to the democratic national convention. The treasury department is "honeycombed with politics," and so are the other departments. As to congress, there are so many aspirants to the presidency that it is impossible to get away from politics in the consideration of any resolution or bill. The merits of a measure are overshadowed by fancied expediency.

This is a more serious indictment than Mr. Lane's. Bureaucracy has faults enough at the best, but when these are reinforced by the opportunism, timidity and vacillation of practical politicians efficient government becomes impossible. Few men have indulged in the luxury of plain speech and candid criticism of the great admin-

istrative departments in the national capital on the occasion of their retirement from the public service. Mr. Lane has set an excellent precedent. If the people always knew just what officials of ability, energy and independence thought of the methods of official Washington, and the reasons for the inferior results that so often follow promising legislation, the desirable reforms in the organization and the interrelations of the national services might be realized more speedily than there is now any reason to hope.

CONDEMNS METHOD OF HOSPITAL STANDARDIZATION AS ADOPTED BY THE AMERICAN COLLEGE OF SURGEONS IN CO-OPERATION WITH THE CATHOLIC HOSPITAL ASSOCIATION OF NORTH AMERICA

Peoria City Medical Society at its June meeting unanimously adopted the following:

Your committee appointed to investigate the movement inaugurated by the American College of Surgeons to classify, or as they term it to "standardize," the hospitals of the United States and Canada beg leave to report as follows:

We find that the College of Surgeons is an organization of about four thousand surgeons. (*World's Work*, June 1920, Page 202). It has a Director *who is not a physician*. Closely allied with the College of Surgeons and working in harmony with it is the Catholic Hospital Association of North America. Its president is Rev. Chas. B. Moulinier, *who is not a physician*.

With regard to the aims and purposes of the College of Surgeons in connection with the so-called "standardization" of hospitals, it is a little difficult to find out anything definite. As a magazine writer (*World's Work*, June 1920, Page 202) has truthfully said: "It is easier to say what it is not than what it is, for with all its reality it is thoroughly intangible." This much has been ascertained from a study of the literature issued by the College of Surgeons.

1st. It is the intention to organize into a staff all the physicians and surgeons who bring patients to and treat patients in each hospital.

2nd. That no physician or surgeon will be permitted to practice in a hospital unless he conforms to certain rules and regulations.

3rd. That one of the rules requires a complete personal history of the patient; with clinical, pathological and x-ray findings when indicated; the working diagnosis, the treatment, medical and surgical; the medical progress; the condition on discharge with final diagnosis; and in case of death, the autopsy findings when available; all filed in an accessible manner in the hospital.

When we turn to the Catholic Hospital Association we find more illuminating information. In the May number of *Hospital Progress*, the official organ of the Catholic Hospital Association, we find an article by

Dr. Joseph Byrne of New York in which he states that the functions of the hospital are:

1st, treatment of the sick; 2nd, educational; 3rd, research work. Your committee desires to differ from the first proposition that the function of the hospital is to treat the sick. Your committee is firmly of the belief that the treatment of the sick should belong at any and all times to the medical profession, and your committee further desires at this time to lay down this fundamental principle as a basis for argument further along in this report. *The treatment of the sick belongs, properly, to the medical profession, with the hospitals and nurses as auxiliaries; and not to the hospital with the medical profession and nurses as auxiliaries.*

An article by Dr. B. F. McGrath, who is a member of the College of Surgeons, in the same number of *Hospital Progress*, presents an elaborate diagram showing how the patient should be received by the hospital, how all diagnostic work should be done by the hospital, and how follow-up letters should be sent to the patient by the hospital after he leaves it.

An article by Dr. J. T. Bottomley, who is a member of the College of Surgeons, claims that no doctor should be granted the privilege of hospital practice unless he conforms to certain hospital rules and regulations which are included in the minimum requirements of the College of Surgeons.

From the foregoing it is evident that in order to be in Class A in the classification, a hospital must take charge of the patient who comes within its walls; must have a complete personal history of the patient's previous ailments "filed in an accessible manner," which means in a partially, at least, public place; must do the diagnostic work done to the patient; and, possibly, send out follow-up letters to the patient after he leaves the hospital so that the hospital may know the ultimate results of the treatment. If any physician does not consent to the above action on the part of the hospital he must be refused the "privilege of practice" in the hospital.

At this place your committee, if it may so presume, would like to suggest to the College of Surgeons and the Catholic Hospital Association that they discuss these matters with the American Medical Association, or the different State Medical Societies, through a representative committee or otherwise, as these bodies comprise practically all of the members of the medical profession. It is barely possible that internists, general practitioners, and obstetricians, and surgeons, including eye, ear, nose and throat specialists, who do not belong to the College of Surgeons, might desire to have some voice in framing the minimum requirements, especially as their refusal to comply with the minimum requirements may result in their being refused the "privilege of practice" in the hospitals.

The large body of the medical profession is not likely to look with favor on a plan that permits the non-medical hospital authorities to determine who is competent to practice medicine and surgery in the hospital and who is not.

There are three groups directly concerned in this movement to classify the hospitals: the patients, the hospitals, and the medical profession. As the welfare of the patients should be the first consideration, in the opinion of your committee, they are considered first in this report. The large majority of the patients in the Peoria hospitals are private patients who pay for the services of their physician and for their hospital service. Therefore, they do not owe anybody anything for service rendered them, and do not need to pay in part for the service by allowing their private ills and infirmities to be made a matter of general discussion. There is, of course, an inevitable financial transaction between the patient and his medical adviser, but there is something more than that. There is the sympathetic, kindly, confidential, private relationship which exists between the patient and his doctor. This confidence is practically never abused by a member of the medical profession and must be maintained if the patient is to be encouraged to tell all the facts in his previous history.

The Peoria hospitals are owned and controlled by non-medical or lay authorities. The confidential relationship of patient and physician cannot be maintained if the previous history, laying bare in many cases the patient's private life, is to be turned over to non-medical hospital authorities to be "filed in an accessible manner." The patient, who pays for his service, certainly has a right to decide whether his complete record shall be filed in an accessible manner, and be used in a quasi public manner for teaching or consultation purposes; and *so far the patient has not been consulted about the matter.*

In many cases the diagnostic work has been done before the patient reaches the hospital. It would be manifestly unfair to require him to pay for duplicate of diagnostic work so that the hospital may have a record of it.

The physician can and should retain the previous histories of his patients, and a record of the diagnostic work done, with the diagnosis and results filed in a private manner in his own keeping. In this way the confidential relationship existing between him and his patient will not be abused. If the patient changes physicians his request will be sufficient to secure for his second physician the information collected by his first physician. Your committee, therefore, cannot see how the patient's condition is going to be helped or aided by filing his previous history in an accessible manner in a public institution.

The second group to be considered are the hospitals. Naturally the hospitals are in favor of the so-called standardization movement. If every physician who brings patients to a hospital is compelled, by a threat of being deprived of the privilege of practicing in the hospital, to turn over to the non-medical authorities of the institution the confidential story of his patients as revealed in the previous history; and is compelled to have all the diagnostic work on patients done in the hospital, allowing the hospital to keep a complete record of the same; and, further, is compelled to allow

the authorities of the hospital to send out follow-up letters to his patients inquiring about their health after they leave the hospital, in ten years the hospital will have his patients looking to the institution for their medical and surgical aid.

Your committee does not believe it is fair to the medical profession to compel its members to turn over to the hospital, not only the previous history, with its confidential disclosures of the patients, but also a written record of the results of their wisdom, skill and experience. If to this is added the kindly sympathetic letters sent out from the hospital, it is easy to see that the patients, after a few years of this program, will naturally turn to the institution directly for medical and surgical aid. When this occurs the hospitals can easily employ their surgeon and internist on a salary as they do their pathologist or radiographer. Or they can just as easily discard old practitioners who have spent the best years of their lives in bringing patients to their institutions in favor of younger, more energetic men. The older practitioners will be helpless because the hospitals will have all of their records. Instead of the hospitals being dependent on the medical profession for patients and support, the medical profession will be dependent on the hospitals.

If you think this idea is far-fetched, listen to the following editorial in the June number of *Hospital Progress* by Father Moulinier, the President of the Catholic Hospital Association of North America:

THE HOSPITAL'S THE THING

"When will the Sisters, and the doctors, and the nurses, and the public come to realize that modern institutional, medical, and surgical service to the sick is nothing more than a co-operative service whose net result is a *real* hospital? When will every patient come to know and to feel that he or she is the hospital's patient? When will the Sisters and the nurses and the doctors come to look upon *every patient as the hospital's patient* and not this, that, or the other doctor's patient? Will it ever be possible that every person working in the hospital can rise so high, become so broad, and see so deeply into the soul of the hospital practice that is beginning today and will reach its zenith at some future day as to escape from the pettiness of self and the narrowness of the individual mind? When will our hospitalers realize that the *hospital's the thing*?—C. B. M."

Of course the hospitals are in favor of the movement. As the Jew says in the play "Welcome Stranger," "they are not altogether d—d fools either."

The third group to be considered is the medical profession. There is no good that can come from the so-called standardization movement that cannot better be accomplished by the medical profession itself. If every physician kept complete case histories of his patients it would undoubtedly be of great benefit to himself and to his patients. A great many more patients would be benefited than by the standardization movement because the number would not be limited to patients in the hospital. If every physician would

send out follow-up letters to his patients he would gain a great deal in knowledge as to the ultimate results of his treatment, and he would retain a firmer hold on the confidence of his patients. There can be no objection to complete case history and records and to letters of inquiry. The objection is to putting these private records in the keeping of institutions and non-medical hospital authorities.

With the records in the keeping of physicians they can still be used for discussion and instruction in a medical group without any violation of confidence, because a physician in reporting a case never gives the name of the patient, but always refers to him by number or initials.

The hospitals in Peoria have a record of all that is done to the individual patient while he is in the institution, and in the judgment of your committee that is all they are entitled to have. They do not have, it is true, a history of all that happened in a medical way to the patient before he entered the institution, and after he left it, but your committee can see no reason why that information should be in the keeping of non-medical hospital authorities.

The staff of the hospitals in Peoria have regular meetings at stated intervals in which matters concerning the welfare of the institution are discussed. These hospitals are rendering service to this community and will be judged by the community, and rewarded or condemned accordingly. Your committee does not think that our hospitals need concern themselves about any classification instituted by a self-appointed organization comprising only a small minority of a branch of the medical profession.

In view of the foregoing your committee recommends to the members of this Society that you continue to permit the hospitals to have a record of all that is done to your patients while in the institutions, as you have done in the past. Your committee further recommends that you refuse to give the hospitals or permit them to take a complete case history of your patients. Your committee further recommends that you refuse to allow the hospitals to send out follow-up letters to your patients after they leave the institution. Let the hospitals understand that their connection with the patient ceases when he leaves the institution. Any further responsibility will be accepted by you.

It should be understood that nothing in the foregoing should be construed as a reflection on or a criticism of the Peoria Hospitals. So far as your committee is aware, the hospitals of Peoria have not been consulted in the matter of the so-called standardization.

OPPOSES DOCTOR WORSHIP

An appeal against "worship of medical men" is contained in a brief filed by the appellant in the appeal to the Nebraska Supreme Court from the District Court of...County of the case of E...P, administrator of the estate of B...P, deceased, versus J. W. K.

The facts contained in the review of the case show: that four children of one family were stricken with diphtheria and died. The statute of limitations has run against two of the deaths, but the plaintiff charges the physician with conduct outrageously negligent in the treatment of B...P, and with malpractice. It is alleged that diphtheria not only took the first little patient of the family, but three others.

B... was permitted to remain in the same room with R.... It is alleged that the physician was negligent in failing to administer antitoxin. The appellant's brief takes this shot at physicians:

"If such unreasonable latitude and unbridled exemption is to be permitted any man who calls himself a doctor, and he is to be elevated from the business and professional position of responsibility, or quasi-responsibility, to a deification—a regular old Moloch,—we would be declining to superstition instead of evolving with intelligence. We insist that physicians be not worshipped as medicine men and allowed to do anything with human life."

The abbreviations in the above article, taken from a leading Nebraska morning newspaper, are made by the responsible editorial writer of this journal; who is not acquainted with any of the parties to the suit, above referred to, except to say that he has looked up the standing of the physician in the case. He finds that said physician is a graduate of a reputable medical college of Nebraska, from which he graduated sixteen years ago, and that he has followed his calling ever since.

Since the physician is the defendant in the case, appealed to the Supreme Court, it is assumed that he won in the lower court.

The comment elicited was predicated upon the rather startling assumption, that medical men are worshipped in this day and by this generation, and that the aforementioned prominent "Daily," by printing the above extract from the brief in the case, seems to incline to a like belief.

That there has been a badly concealed antagonism to the profession, by one or more of its editorial staff, the writer has long known; so this does not surprise him. Worship of medical men, however, and to the extent that they,—in the guise of Moloch, may, unmolested and unpunished, burn to a crisp,—kill innocent babies—is a great surprise to him and contrary to his experience over many years as a physician; he is strongly inclined to the belief: that of all the labor, all the sacrifices, that men can and do, bring to the service of their fellow men, the PHYSICIAN is the most poorly recompensed and, worse than that, he still feels that the old saying:

"When the devil was sick,

The devil a saint would be;

When the devil got well,

The devil a saint was he"

is in full force and effect, and the part of the brief, above quoted, is all the proof he needs for his contention.

Four of the children of this family died of diphtheria. How many were dying sick, or dying when the doctor was called? The statute of limitation had run against the prosecution of the doctor, when the suit was started, four years and over after the death of two of the children! It is not stated whether or not in the case of these two sufferers, the hand of the destroyer had not come before and snatched them from rescue and from life. Whether the doctor did his full duty the writer is not in position to judge; but this he knows: that it is a common trick of some lawyers to advise waiting for bringing a suit for malpractice, until the details of the case have faded from the minds of almost every one concerned in the case, except that they never fail to prosecute just before the statute of limitations bars further proceedings. Why wait four years? Does not the Apostle Paul say: "Be ye angry, and sin not; let not the sun go down upon your wrath!" Why carry it around in your hearts, almost four years, and then appeal to the courts for justice and reparation? Very often the suit is brought to prevent the physician to collect a just debt, a bill for which he failed to present, until forced by an empty larder and an equally empty pocketbook, he asks for pay, and in place of bread, he usually gets a lawsuit instead.

Not one of these defendant Doctors of Medicine had, and now has, the slightest remembrance that any one of them stood in danger of Deification, and to even hint that any one of them was to be transformed into a tin god after they rendered their services, seems to us, to use the attorney's language, outrageous.—Western Medical Review.

PRACTICE OF MEDICINE BY LEGISLATIVE DICTATION

There is a grave menace of what might be termed legislative doctoring. By that we do not mean merely "doctoring" the legislatures and the laws, a procedure of which we have long had too much. We mean, rather, the practice of medicine by legislative dictation instead of at the discretion of educated, experienced and responsible physicians. We mean that efforts are being made to invest the politicians and lawyers who compose the great majorities of Congress and the state legislatures with the power to say what drugs shall or shall not be prescribed for sick people, and in what doses that shall be administered.

A little while ago the suggestion of such a thing would have seemed fantastic. But it has now in a measure been actually realized, in legislation which dictates to the medical profession the conditions under which alcoholic remedies may be used, the amount of dosage, and even the hours at which doses of such medicines may be taken. Since that has been done, it would be rash to say that anything else is too preposterous or too out-

rageous to be done. As a matter of fact, an attempt was recently made in the state of New York, and it is reported that one is now being made in Congress, to smuggle through a bill which would deny to physicians discretion or power in the administration of some of the most valuable remedies in the pharmacopoeia.

The sinister Cotillo bill at Albany aimed directly at forbidding physicians to prescribe narcotic drugs in private practice, at any rate to persons suffering from "addiction disease." Now these latter form a numerous class, of the most pitiable patients, who in the great majority of cases are in absolute need of judicious and sympathetic treatment with narcotics modified to suit their individual conditions. To deny them such treatment at the hands of competent physicians would be inhuman cruelty, which would either drive the hapless sufferers into "institutions" or still further wreck their health and destroy their lives. As for the institutions referred to, while some are doubtless conscientiously and efficiently conducted, there is only too much reason to fear that many are sordidly conducted for the sake of what profit can be extorted from the afflictions of suffering humanity.

The furtive and surreptitious manner in which it was attempted to get that bill through the New York legislature was in itself sufficient to condemn the thing. In justice to Senator Cotillo it must be said that as soon as he was made aware of the character of the measure for which he had unwittingly and innocently been made the nominal sponsor, he withdrew it. But the incident did not end the menace. The same interests and influences, apparently, which sought to perpetrate that job at Albany are also busy and energetic, in much the same surreptitious way, at Washington, trying to get the national government to arrogate to itself a monopoly in narcotic drugs. It ought to be, of course, impossible for any such monstrous legislation even to approximate enactment. But it will be impossible only if the members of the medical profession and all right thinking members of the general public remember and act upon the truth that "the condition upon which God hath given liberty to man is eternal vigilance."

Drug addition is undeniably a very great evil, which in grosser forms of it are to be checked and abated by legislation and by police administration. But the most important part of it can be dealt with efficaciously only by competent and conscientious physicians in private practice. To forbid such treatment of it would be to place sufferers at the mercy of "institutions" which most of them would rather die than enter, or of the purveyors of "sure cures" of the most pernicious type. It may be that further legislation, state or national, is needed on the subject. But it is absolutely certain that no such legislation should be enacted without the fullest possible publicity, or without first having a competent and

open investigation which would bring all the conditions and facts to the intelligent attention of the lawmakers. There must be no more "sneak" legislation to enable designing men either to exploit the vices or to fatten upon the afflictions of their fellows.—Harvey's Weekly.

WE ARE APEING THE OLD WORLD AND WE MAY REAP THE SAME HARVEST

It is no idle dream to say that the medical profession must organize for self-protection. Every profession and trade has done so, and it is time we must, or would-be social reformers and philanthropists will wipe us off the map. The constant and steady increase in the price of labor, the terrific propaganda now being carried on by teachers' organizations, not only in the magazines and daily papers, but in the halls of legislation, are but examples of the trend of organization. Even the ministers, no doubt the poorest paid of any profession, feel the necessity of the occasion and are being rewarded for their organized efforts by a slight rise in their yearly stipends. The conditions call for a second sober thought, and the best efforts we possess as men to check this restlessness and craze for large stipends and to bring conditions to a normal status. The present unrest is fraught with danger to orderly society and demands a steady and wise directing hand to avert actual catastrophe to organized society.

Right or wrong, I will not positively assert, but it appears to me I can discern the directing hand of socialism in much of our recent legislation. It is class legislation of the most dangerous type. We are apeing after the Old World and we may reap the same harvest. Teachers' pensions, mothers' pensions, blind pensions, soldiers' pensions, workmen's compensation laws, industrial and sick insurance, etc. We wonder where it will stop, and why one class should be selected for benefits and the other class made to bear the burdens.

Much of this legislation is inimical to the profession. The teacher and wage earner receive a minimum salary by state legislation, and the doctor is taxed yearly for the privilege of following his profession after preparing himself in accordance to state legislation. He pays a license to the national government for the privilege of prescribing narcotics and he is limited in the prescribing of alcoholics and bound with endless

red tape in so doing. These conditions do not interfere with me to any great degree, but are cited to illustrate the tendency of recent legislation.

Doctors must organize, not only for their own protection but for the welfare of those following us. Dr. O'Reilly of New York recently declared that refusal to tender his services to the Health Insurance Panel would inevitably lead to the state's refusal in turn to renew the license of the offending physician when he applied for re-registration. Dr. O'Reilly says he was informed by State Senator Loring Brown that any physician, dentist or druggist who refused to make the health insurance law operative when enacted, would have his license to practice his profession in the state taken away from him. "In other words," says the doctor, "we are to be destroyed unless our three professions supinely surrender our manhood and our right to the living to which we have consecrated our lives. While it may be true that our right to a license is alienable and that the state, out of pique, may take it away from us, the fact remains that our economic right is the same as that of any other citizen. Economically the right of the physician, dentist and druggist is no different from the longshoreman. If you cut down the wages of the longshoreman he has the right to protect himself. Our right is precisely the same."

It is time for the doctor to wake up. He has been too self-satisfied and indifferent.—*N. E. M. A. Quarterly, June 1920.*

MEDICAL VETERANS OF THE WORLD WAR, ATTENTION!

The Illinois Council of the Medical Veterans of the World's War, was organized at Rockford, Illinois, May 19. Every physician in Illinois who served the Nation in the late war should become a member. This includes all who wore the uniform and the medical members of each local or district draft board, and the regularly appointed members of the Medical Advisory Board.

The officers of the Illinois Council, elected at Rockford are as follows: Vice-president for Illinois and chairman of the Illinois Council, Dr. Joseph R. Hollowbush, Rock Island; councilors, Drs. S. M. Wylie, Paxton, and M. L. Harris, Chicago; secretary and treasurer, Dr. W. H. Gilmore,

Mt. Vernon; delegate to the National Council, Dr. George de Tarnowsky, Chicago.

Application blanks can be procured by addressing Dr. John M. Dodson, 25 East Washington St., Chicago.

Dr. Dodson can also supply members with the new and attractive badge, the price of which, to cover cost of production and mailing, is fifty cents.

AND BLOOEY—UP GOES THE DOCTOR'S UNION

We note in an eastern medical journal that some 200 doctors in New York and Brooklyn have formed a union and have applied to the American Federation of Labor for a charter. The next step we presume will be the fixing of union hours, a scale of wages and overtime charges, defining of apprentices and helpers and the staging of a strike or two. Just about then some utopian idealist will apply for a restraining injunction and bloocy—up goes the doctor's union. And yet they say New York and Brooklyn is to be the medical center of the world—well, probably the union is needed for a welcoming body for Russian and German visitors.—*Journal of the Michigan State Medical Society, April, 1920.*

UNWEPT, UNHONORED, UNHUNG

Those precursors of the millennium who advocate the abolition of the death penalty will find few recruits in the ranks of The American Legion as long as such brothers in good standing of the I. W. W. as John Lamb, Eugene Barnett, O. C. Bland, Ray Becker, Britt Smith, James McInerney and Bert Bland remain unhung.

Four American Legion men fell before the cowardly volley these murderers delivered from ambush on the peaceful Armistice Day paraders at Centralia, Wash. Their innocent victims—our martyred comrades—are under the sod, which is greening to the pulses of the first soft winds of Spring. Warren Grimm, Arthur McElfresh, Ben Casagrande and Dale Hubbard are dead. They died for their country as surely as our dead in France died for it.

Their murderers live; in prison at present, it is true, but prison has become a sort of second home for an I. W. W.

If our hearts are hard at the thought we have only to discover the reason why. The eye-for-an-eye days are not far behind us; the days when it was trench for trench, shot for shot, life for life. If our thoughts are bitter we have only to recall memories of the buddies of other recent days—great days, who can

forget them?—buddies who sleep over yonder. If our hearts are hard and our thoughts bitter, it is because it is not the civilians of today who speak to you, but the soldiers of yesterday who speak.—*American Legion*.

WHAT AILS OUR AMERICAN COLLEGES AND UNIVERSITIES?

COLLEGES MAKE 400,000 REDS A YEAR—HINMAN

"Revolutionary socialism is now an American institution. It is being taught in most of the five or six hundred colleges of the country and about 400,000 students are being turned out annually imbued with its doctrines."

This charge against college professors was made yesterday by George Wheeler Hinman of Winnetka, former publisher of the *Inter Ocean* and still more recently president of Marietta college in Ohio. Mr. Hinman delivered an address before the Evanston council of the Knights of Columbus.

"It is not necessary to go to Bill Haywood and Eugene Debs for revolutionary doctrines," he said. "Look for the college professors. The most effective arguments for revolutionary socialism today are being written by the professors in some of our largest universities. Socialism is no longer a doctrine of the Russians and the Germans. Europe is no longer its cradle.

"It is being openly and deliberately taught to our young men and women. I have traveled extensively recently and it is a sad thing to see such conditions exist in America and to hear such preachments permitted within our borders.

"Since the deportation of the Reds was stopped the revolutionary Socialists have been allowed to plot openly, to defy the government, to preach their pernicious teachings from public platforms and in the lecture halls of our schools.

"I tell you frankly that things have come to such a pass that I would rather have my son sit at the feet of Debs than send him to some of the eastern theological seminaries. There, where men are being taught to mold our thought and guide our morals, the harm is greatest. The country is sleeping and so is congress."

Chicago Tribune, May 28, 1920.

NOTE: By virtue of the intimacy and sanctity of the physician's relation with his patients, doctors are the most forceful teachers of society. Here is a grand place for missionary work, and every physician should exert himself to the utmost to help educate the public along safe and sane lines in order to help keep America safe for Americans.

A TRADE UNION FOR MEDICAL MEN.

According to the *Medical Record*, London letter July 29, 1919, the insurance acts committee

of the British Medical Association held a meeting in London on July 25. At this meeting the question was discussed as to whether doctors should join a trade union. The suggestion was made some time ago that in order to defend their interests, members of the medical profession should follow the example of the trades and form a union.

It was recommended at this meeting that the British Medical Association should not endeavor to prevent members from joining any other body which was attempting to combine the profession on trade union lines. Dr. E. K. Fleming in moving the resolution urged that the policy of the British Medical Association should be one of co-operation with the Medico-Political Union. That was a question of policy. Personally he was not a believer in trade unionism in the profession, but they ought not to put "the lid" on those who wished to join the other body. Dr. C. H. Panting said he thought that the Association was justified in fighting trade unionism tooth and nail. The resolution was defeated by 75 votes to 17.

Although the British Medical Association, or rather the majority of its members, appears to be opposed to a medical union, the movement *in its favor is the straw which shows which way the wind blows*. It may be unethical and undignified for the medical profession to copy the methods of the trades for its own protection, but at the same time if its interests demand that such a step should be taken, some sacrifice of dignity and ethics must be made. Also it must be borne in mind that to a large extent *the old order of things is passing*. The practice of medicine is going through a stage of transition and many of the old traditions will be cast on the scrap heap. However, it is well that a sane spirit of conservatism should still pervade the medical profession, and that while change and reforms are certain to come, its motto should be *Festina lente*.

THE NURSING SITUATION

Evidently the medical profession and the public have come to a critical point regarding the employment of nurses, perhaps on account of the increased cost of living and the luxuries which tempt the employed, as well as the unemployed, and which have created a condition among the nurses that is at the present time a very embarrassing one.

A registered nurse, until recently (within the past two years), received twenty-five dollars and three hours' off time. But this winter the Association of Nurses decided that they would have to ask for better wages and more time off. And in spite of the fact that on special occasions they formerly got thirty-five dollars a week for taking care of mental or contagious cases, they have increased their fees all along the line, so that now a registered nurse demands thirty-five dollars a week and five hours off each day. Of course, to the people of means this is not so embarrassing as it might seem, although it becomes a financial burden even to people who are in good circumstances when they employ two nurses, and it cuts off the man of moderate means, the sick person who really needs the attention of a nurse, from the kind of care he is entitled to.

This mild "money" infection has extended, not only to the registered nurse, but to the trained nurse and the practical nurse, and they are all boosting themselves into a high-class profession. Consequently, ways and means must be devised to prevent the extremists from controlling the entire situation.

Some years ago Dr. Haldor Sneve had the temerity to read a paper before the State Nurses' Association when they held their meeting in St. Paul, urging upon them the advisability of a class of nurses who had had one year of intensive training, thus fitting them for the ordinary work which is demanded of a nurse. The Association took decided ground against this proposition, claiming that one year was not enough to give a nurse experience or enable her to meet a situation which a two or three-year trained nurse would have. So opposed were they to this plan that they secured the enactment of a law controlling the Nurses' Examining Board and the type of nurses qualified to take care of the sick. Then came the war, the influenza epidemic, and numerous other things which have upset the condition of the entire country. The demand was so great for nurses and so large a number of them were drafted into service of one kind or another that the people suffered in many ways; and that suffering has not been entirely eliminated. The nurses have been slow in coming back from the service, some have changed their occupations, some have married, and some have been killed in action. The result is a slow readjustment of the entire situation to the discomfiture of the ordinary middle-class man.

The Visiting Nurses' Association, which is represented in all the large cities, has been a relief in some ways, except as they were interfered with by the epidemic of influenza. Then, too, this Association has created a body of nurses who have been trained in visiting nurses' work, and who go into this work, not for the money they receive, but for the good they can do for sick people. Out of it has come the hourly nurse, who goes to the house

and does what is necessary and collects no fee from the poor patient or only a small one from the well-to-do patient. She gives baths, directs the mother as to the care of the child, gives the necessary instructions, and, incidentally, makes an inspection of the family and their diseases, and turns in her report, thus giving her services for a brief period, perhaps at a critical moment, where it is most needed.

If the present situation endures very long some steps will have to be taken by our medical societies and hospitals to provide nurses for incidental or emergency work, and the time must inevitably come when there will be a class of nurses, graded perhaps as to qualifications, trained in the essentials of nursing, who can nurse without assuming too much responsibility, to the entire satisfaction of the community, and also be within the limits of the purse of the ordinary family.

The contrast between the demand of nurses for increased fees and time off and that of the busy doctor who works more hours than he should, is a guide-post which may clear up the situation in time. If a busy practitioner, during an epidemic of influenza or during the time when a number of very sick people are under his care, should decide that five hours during the day he could do as he pleased, he would very soon become an unpopular physician. At the present time, when there is so much sickness and when almost every medical man is rushed and busy morning, afternoon and evening, he would not think for a moment of neglecting his work. Neither does he complain if his night slumber is invaded or if he is called in the night to attend some one who is critically ill.

Just how long these demands will prevail depends upon the financial conditions. They are now simply extravagances. A slump is inevitable within a reasonable time, and when this change in prices, both for work and supplies, comes, everything will have to go down into the same pit. And then, perhaps, the hospitals and doctors will be able to create a new class of nurses endowed with sufficient intelligence and training to take the place of the high-grade nurse who considers herself worth thirty-five to forty-five, or even fifty dollars a week. A reformation should be begun in the medical societies, and an appeal should be put up to the nurses so that they will conform in a reasonable manner to the needs of the public.

Then, too, another situation looms up, and that is the difficulty of hospitals securing a sufficient number of applicants or candidates for courses in the schools of nursing. The women who formerly applied for training in schools for nursing are now occupied in other ways, in either industry or office life, and it is questionable now whether some of the hospitals will be able to go on unless they hire trained nurses at exorbitant prices. We recognize the necessity of a responsible, educated, trained nurse. We know that some of the nurses

are well worth forty-five dollars a week; but other nurses trained in the same school may not be worth forty-five cents, yet the demands are the same for both types, consequently a more careful weeding out and a more careful investigation of the situation is imperative, and nurses must in some way endeavor to comply with the demands of the public.—*Journal-Lancet*.

OVERTRAINING THE NURSE

More than fifty thousand deaths occurred during the influenza epidemic which might have been prevented had fairly efficient nursing been available, according to the estimate of a well-known Chicago practitioner. Sharply criticising the short-sighted rules and regulations of law and health boards which require hospitals to admit only the super-trained nurse, the conclusion is reached that:

"The best class of nurses come from young women who have had good home training, grammar school education, and who are from bread-winning families." Another writer believes "Nurses are frequently retained in training schools who are incompetent and unsatisfactory, because they have had one year of high-school education in compliance with the requirements of the State Board of Nurse Examiners." Daughters of thousands of mechanics have been rejected from such schools because they have not been in position to obtain the one-year preliminary, but are thoroughly qualified otherwise. It is pointed out that thousands of wounded soldiers obtained very efficient first aid, not from super-educated nurses, but from orderlies who had had very little except intensive training for a few weeks or months after they had been taken from the ranks.

We thoroughly agree that the trend of the times seems to point to a condition which will ultimately make candidates for the nursing profession fewer and fewer until the dearth of nurses will be felt throughout the country. There is no good reason why an intelligent woman should be required to give three years of her time in order to master the fundamentals necessary to carry out the orders of the attending physician. While thorough education of the nurse is to be encouraged and the completest information and instruction given her, it is not necessary to require a course of study substantially equivalent in time to that taken by the bulk of physicians under whom she must work. If the breaking-in process, drudgery and similar time-wasting processes were eliminated from the three years course required, at least one year could be profitably saved to the nurse, which in turn could be given to the care of sick people who are suffering for the lack of care they should have. As the matter now stands, the creation of the nurse from raw material savors much of the apprentice system of unionism. Each one, regardless of mental and physical fitness, goes through the same, often silly,

course of preliminary work, each demands the same remuneration before and after finishing, without reference to the amount of work performed or the superiority of the service rendered above that of her fellow worker.

The physician only requires his orders executed; to do this the nurse needs intelligence, energy and a sensible amount of training. That a course in anatomy and chemistry is necessary to this end is certainly debatable and much suffering could be obviated by instruction in the essentials, leaving the higher education of the nurse to post-graduate work as she develops taste and capability to receive it.—*J. O. S. M. A.*

NOT REQUIRED TO KEEP COPY OF PRESCRIPTION

(*Friedman v. State (Tenn.)*, 213 S. W. R. 418)

The Supreme Court of Tennessee reverses and dismisses this case in which defendant Friedman was convicted for the reason that he "did unlawfully distribute and dispense and prescribe morphin, without keeping a duplicate of the prescription as prescribed by law." The court says that he was not a salesman of the drug mentioned, but was a practicing physician. He prescribed morphin for a habitual user, after attending the patient, but kept no copy or duplicate of the prescription. A question to be decided was whether Acts 1913 (1st Ex. Sess.), Chapter 11, required him to do so. That portion of the act bearing on this subject reads:

"Physicians who shall dispense or distribute any of the aforesaid drugs provided by this act shall keep a duplicate of all prescriptions issued by them for a term of two years, and said duplicate shall be subject to inspection by any of the officers named in the preceding paragraph." Section 2.

It will be observed that it is not all physicians who are included within the provisions of this act. It is only physicians "who shall dispense or distribute any of the aforesaid drugs provided by this act, who shall keep a duplicate of all prescriptions issued by them for a term of two years." The act thus limits the number of physicians included within its terms. It is plain and unambiguous, and there is no room for construction. Therefore the court holds that the defendant did not violate this section of the act when he failed to keep a duplicate of the prescription, because he did not dispense or distribute the drug. The court is unable to comprehend how the defendant could be deemed a dispenser or distributor of the drug merely because he failed to preserve a duplicate of his prescription. The offense was not for issuing the prescription, because the defendant complied with every requirement of the law in that respect. The offense charged was failure on his part to keep a duplicate of the prescription, which he was

not required to do under a proper construction of the act.

Counsel for the state ingeniously argued that the statute should be given the construction insisted on for the state, because of supposed conveniences to the agents of the state who check up the sale of habit forming drugs. The court may well admit the conveniences suggested, but a sufficient answer in law is that the statute does not include them. Therefore it could not matter in this case what meaning was to be attributed to the words "dispense" and "distribute," because the defendant was in no sense a party to a dispensation or distribution of the drug because he failed to keep a duplicate of his prescription. It was the prescription furnished the druggist on which he acted, and not a duplicate in the hands of a physician.

The case of *Hyde v. State*, 131 Tenn. 208, 174 S. W. 1127, is in no sense in conflict with this opinion. In that case Dr. Hyde issued a prescription without attending the patient. It was held that the prescription made him an aider and abettor in the sale, although the alleged patient was not in existence.—*J. A. M. A.*

THE INTERMINABLE REFORMER AND INVESTIGATOR

This season has brought to the earth's surface more than the usual number of reformers and investigators. The air is heavy with their efforts, and deep-breathing is almost impossible for the man who is attending strictly to his own business.

At any moment, at any place, one may expect to be reformed or investigated. If you are successful, beware, for your very success may demand a searchlight. If you are plodding along in a quiet, unobtrusive manner, trying to make both ends meet, look out, for you may be asked to explain why you are not doing better. If by chance you occupy a position of trust and you are over-working your body and brain to conscientiously carry out the spirit and the letter of your office, you may be called upon to show cause why you should not be ousted.

For the same reason that has always existed there are men and women who delight in reforming and investigating others before they themselves are competent to pass upon the simpler problems of cause and effect.

The so-called board of "friendly visitors" are usually responsible for more trouble and confusion than can be allayed in months or years, even when their findings are based upon careless observations, immature judgment, and erroneous conclusions, and have been denounced as incorrect by competent experts. Why is it necessary for boards of investigation to be composed of ignorant self-satisfied fanatics?

A short-haired woman, an untrained preacher, and a man of ample means who finds time hanging heavily on his hands, usually constitute a board of investigation. The results of their findings make thinking men grind their teeth in rage and almost weep for an op-

portunity to give this incongruous committee a few simple lessons in right living and right thinking.

To pick up the morning papers and find that no new investigating committee had been appointed over night would be a shock to the average reader. One often wonders how the legislature can accomplish any good work, as the majority of that body seems to be made up of committees of investigation.

Committees to the "right of them;" committees to the "left of them;" committees in front and behind them, "volleyed and thundered!" Well, if they continue to volley and thunder, let them, for no power on earth can prevent it, and we must accept their vaporings, even though it is amusing, disconcerting, discouraging, destructive to business, destructive to morals, and leaves us without a leg of support. The joys of the investigator must be preserved in spite of the fact that the majority of investigators and reformers need investigating and reforming rather than the unfortunate who happens to be in their pathway.

For the love of peace and good citizenship, will some one kindly appoint some one who knows something when an investigation or reform is actually needed? Kindly also permit us to go about our legitimate business without interruption and with the understanding that most people are trying to conduct themselves sanely.—*The Journal of the Minnesota State Medical Association.*

BOLSHEVISM AND THE DOCTORS CIVIC DUTY

I. W. W'sm, Bolshevism, and a lot of other un-Americanisms are running wild in this country at the present time, and while the medical profession is suffering as little from them as any other trade or profession, yet we grow hungry because of the continuously increasing cost of food stuff and grow cold if the coal supply is short and suffer otherwise if the railroads fail to keep their schedule and bring in the necessary supplies.

We cannot shirk our responsibility in this matter. We are just as much to blame for these conditions as the other citizens. We are largely at fault that these conditions exist and we will be held criminally at fault if they continue.

The trouble is with the medical profession they take little, if any, interest in civic affairs. The "Let George Do It" spirit has prevailed throughout the country until we have brought about a condition that is a real menace to the safety of the nation.

Any primary or election day that any member of the medical profession fails to go to the polls and vote, that day that man or woman has en-

couraged all these isms from which our country is suffering. No matter to what political party you may belong the important point is that you go to the polls and vote for somebody.

So many men are prou to boast of their Americanism but fail to suit the action to the word. If politics are not what you would like to have them get in and help clean house. There never was a time in the history of our country when it was so necessary for all responsible right thinking people to get interested in civic affairs and help prevent the attempt at control of our government by a class of citizens who are attempting to Russianize America by underground methods.

Correspondence

THE POWER OF MEDICAL CITIZENSHIP PROPOSED MEDICO-CIVIC CAMPAIGN ON THE AMERICAN PLAN

The Marines have a Slogan: "If you don't know, you get killed."

Poor Richard had a Proverb: "Never put off till tomorrow what you can do today."

Equity has a Maxim: "He who will not when he may, may not when he will."

Take your pick. They all apply to you because the time has come for medical men to *know* and *act* and *speak* about the hysterical trend of Public Health Legislation which has been manifesting itself throughout the country, ostensibly prepared for the advancement of Welfare, Uplift and the Brotherhood of Man, but really designed to subordinate and control the agencies of Healing for the benefit of the "Worshippers at the Shrine of Something else than Americanism," who have flowed to these shores from the sewers of Europe and who constitute the "*Something for nothing lads*."

The Forces of Unrest, consisting of the false Doctrinaires, the Herr Professors, the Professional Philanthropists, the busy-body Social Surveyors through the medium of magazines and organizations with high-sounding titles in which the word *American* is sure to run, advance the theory that the American workman *wants* this paternalistic legislation but that theory is negated by the fact that such Labor organizations as the American Federation of Labor, the Brotherhood of Locomotive Engineers and the United Textile Workers of America are utterly

opposed to it as subversive of the spirit of individual independence, self-reliance and self-respect and the average American workman, in Unions and out of them, is indignant when he learns just what is promised and just what can be performed and, after a campaign of education conducted by the agencies of Healing in New York State last fall, promptly and effectually voted into retirement a lot of candidates for the assembly who were either non-committal or active proponents of Compulsory Health Insurance. So great was the feeling in New York State that in the legislature of 1920 the Senatorial foster-father of Compulsory Health Insurance, Frederick M. Davenport, offered it merely as an "educational measure" for the reason that "while the public mind was ready for this *wise, social experiment* in 1919, that mind had been *poisoned* and he would not press his bill for passage."

If it be poison to educate the doctors, dentists and druggists of the state to the menace of Compulsory Health Insurance in principle and in its practical application under the provisions of the Davenport bills, and to send those agencies of healing out among the people—their people—to act as missionaries in the homes and on the street, in public halls and in the press, by exhortation and in debate to awaken the people to the unAmericanism of the plan and its propagandists and to the uneconomic and unscientific character of a scheme which would cost 10.3 cents of every dollar a workman earned, to pay the equitable premium, or that would entail a deficit of \$90,000,000 for the taxpayers to pay to save the state from dishonor, then let it be *poisoning* and make the most of it; but, like strychnine to a sick and tired heart, this *poison* judiciously administered, stimulated the public mind and prompted the people to speak in terms of *votes*, punctuated with *defeat* and the legislators stopped, looked and listened and killed that Compulsory Health Insurance Bill in Committee.

By way of reprisal and intimidation for the effrontery of the medical men in fighting this pernicious scheme, there were drafted and introduced a "Medical Practice Act" and a "State Medicine Act"; one punitive of those who fought and the other an alternative means of control and when the Compulsory Health Insurance *kite*

went up in the air these tails followed it and were lost.

Ridicule is a potent weapon and two bills were introduced, one legalizing "Drugless Therapy, including Massotherapy, Mechanotherapy, Hydropathy, Electropathy, Napropathy, Neuropathy, Dietetics, Vibrotherapy, Zonotherapy, Chiropractic, Suggestive Therapeutics, Magnetic Healing, or any other form of drugless therapy that hereafter becomes known or in use," and the other investing Chiropractors with the title of "Doctor" and making a condition precedent to practice, as such, *actual practice for one year prior to the passage of the bill*, which practice

would have been a misdemeanor under the existing laws; the legislators killed the first bill and the Governor vetoed the other.

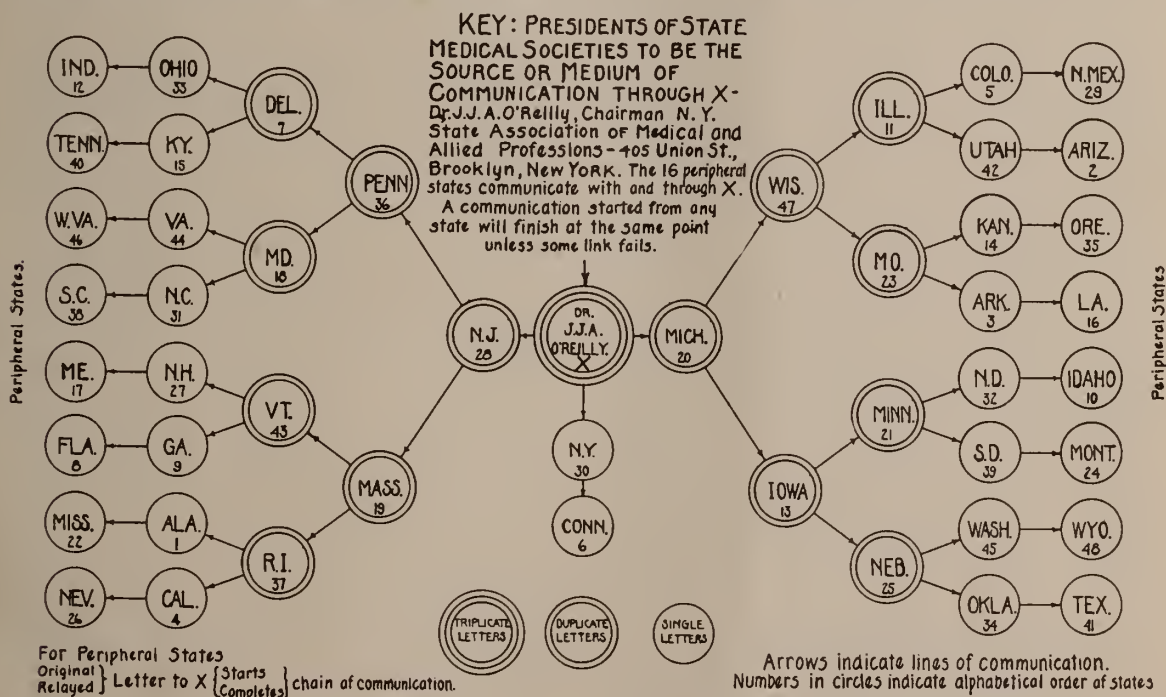
HOW DID WE ACCOMPLISH THIS WORK?

Simply by taking seriously the admonition of a Senator during the hearing on the Davenport-Donahue Compulsory Health Insurance Bill, March 19, 1919, when he said:

"You doctors are the dearest people on earth and we love every hair in your head, as individuals, but as a class you are pitiable! You spend your time and money and energy organizing and maintaining scientific societies for

ORGANIZATION FOR COMMUNICATION BETWEEN STATE MEDICAL SOCIETIES

County and State Medical Societies and the American Medical Association are very well as media of scientific intercourse; as a civic force the plan, herewith presented, of inter-communication will make possible the dissemination of information on pernicious legislation, such as compulsory health insurance, birth control, coercive medical re-registration, State medicine, drugless therapy, chiropractic, etc.; for the promulgation of data in regard to constructive health legislation for the better care of the insane, defective and epileptics, diagnostic centers controlled by medical scientists, not political opportunists; and particularly as a channel of education of physicians, dentists and druggists in their rights and duties as citizens and as a counter force to the "uplifters" and false doctrinaires who have been exploiting the medical profession regardless of equity.



**Key to Chart—

The specific purpose of this chain system is to afford rapid and ready communications between myself and the Presidents of the State Medical Societies (48) and between myself and the "live wire" representatives in the 62 counties of New York State. It is available for any group. A communication from me to the President of the (New Jersey and) Michigan State Medical Society is relayed by the President having two copies of my letter made and mailing them to the Presidents of the Wisconsin and Iowa State Medical Societies, which Presidents in turn make two copies and relay them to the *effere*nt correspondents, one of whom would be

the President of the State Medical Society of Illinois. He does the same, relaying the two letters to Utah and Colorado. Utah in turn relays to Arizona (a Peripheral) and Colorado relays to New Mexico's State Medical Society's President, and these and all other Peripherals made one copy and relay it back to me (x). As these copies reach a link in the chain he can make a short comment and the copies he makes and relays should contain his own and accumulated comments and these will be incorporated in the next Monthly Letter I write. Any link in this chain can start his own original communication forward and the Peripherals of his group will relay to me (x), whereupon I will in turn relay that communication (as a special) through the entire chain.

the advancement of science and the betterment of mankind and you don't know the first thing about the law of self-preservation. Go home and *organize!*"

The *Professional Guild Plan* was begun in Kings County by a handful of men who went among the medical, dental and pharmaceutical societies and induced them to get together through delegates (1 for every 50 members) and form the provisional or embryonic guild; then we went among the doctors, dentists and druggists in their assembly districts, where they were rubbing elbows with each other and with their people—the *voting public*. We organized them in Assembly District Chapters and they, too, elected delegates, and the House of Delegates, thus formed, elected a board of directors, which, in turn, continued the original organization committee as the Public Health Committee, which went into the District Chapters and educated the agencies of healing and helped them to educate the public through public meetings, printed pamphlets and articles in the press.

The *political headquarters* in each assembly district, Democratic and Republican, were glad to offer us the use of their clubrooms, gratis, partly because they respected us as neighbors and partly because they had a personal affection for their own family doctors, and partly because they realized that this new force, if antagonized might wreck party solidarity in state elections as it actually demonstrated its capacity to do in the November, 1919 elections when the people, at the request of their agencies of healing, disregarded party affiliations and voted the defeat of a lot of candidates for the legislature. Bear in mind that not a single chapter either opposed or endorsed any candidate of any party (officially) and that the medical men came through clean—the same self-sacrificing, dignified, foolishly-fond, God-fearing and creature-loving people they have always been, who, as practitioners,

"Live for those who love them

For those they know are true,

For the Heaven that smiles above them

And the good that they can do."

but as medical citizens they realized that by virtue of their education and training they were the best qualified teachers in society and, by virtue of the intimacy and sanctity of their relations with their patients they were the most

forceful teachers of society and that they owed a duty to the public to safeguard it from the menace of epidemic social disease as well as epidemic physical disease and they measured up to that *fiduciary* responsibility like little men and women.

Inter-county Communication was made possible when I made it my business to locate in every one of the 62 counties in New York State "live wires" who were interested in much the same work and by exchanging views and literature we were able to solidify the sentiment and activity of the agencies of healing and secure the support of their people—the voting public—so that when the "pro forma" hearing on Senator Davenport's bill was had we were in position to tell the legislature, not what we would like them to refrain from doing, but what the voting public would not tolerate them doing to the public health and the personal well-being of the citizens and the finances of the state and the usefulness and security of the agencies of healing.

Evil dies hard and we are not unmindful of the adage that "eternal vigilance is the price of safety;" we have already begun our campaign of education to meet and beat the destructive propaganda of the American Association for Labor Legislation and its allies and to prepare constructive legislation along the lines of public health and we are exchanging views by means of a *chain communication plan*.

"*Great Oaks from Little Acorns Grow*" and a monthly letter, written by me and sent to one of those "live wires" in Erie and Schenectady counties will be relayed by them to "live wires" in two other counties and so on until a county correspondent is reached who is a *peripheral* who relays a copy of my original communication to me and I know the chain is complete or I know where the missing link is, and I can take steps to mend the chain. "A chain is as strong as its weakest link." Any link in that chain who has something to communicate sends it *forward* and when the peripheral relays it to me I incorporate it in my next monthly letter and it finds its way back to the originator.

This is too valuable to be circumscribed so I am writing another monthly letter to the Presidents of the State Medical Societies of New Jersey and Michigan who, I confidently expect will realize the value of this plan and make two copies of my communication and

relay them to the *effluent correspondents* as indicated by a chart, copy of which has been sent to the State Presidents of the forty-eight states. Here, too, the *peripherals* relay copy of my own communication back to me, and here, too, any link in the chain may start an original communication forward and it will find its way back to him. Each link is one of a group of four—himself, his *affluent correspondent* and his *effluent correspondents*.

The Medical Press can help a lot. If the State President of any State finds "meat" in those communications he can disseminate it through his State Medical Journal and then transmit it to the State President of the Homeopathic, Eclectic, Dental and Pharmaceutical societies (and the Nurses' societies when they come to realize that the allurements of a lot of visiting nurses' positions is a delusion). Then the State President can organize just such a chain and start the message through the component county societies.

The State Society is the State Society—"only that and nothing more." It can not represent the "unattached" and it does not represent the dentist, druggist, the nurse, etc. *The Guild's the Thing*; it can represent all, and it can devote itself to the work of medical citizenship, leaving the scientific societies free to do their glorious work undisturbed by secular matters. The Guild will be supplemental to the scientific society, not a substitute; their purposes are identical, their functions different. Sympathy and not antagonism should and must be the result and activity in the Guild will make for larger membership and greater interest in the scientific societies.

There is no end to the operation of this force. A chain of the medical journals, another among the medical and surgical supply houses, will reach hosts of thinking, voting people who will receive our ideas and let us have theirs; only a short while ago, at a joint dinner of the Bergen County Medical Society and the Bergen County Bar Association, the lawyers saw the value of this civic force and joined with the agencies of healing in the formation of a professional guild of Bergen County (New Jersey) and one of the guests, a distinguished jurist, suggested that since the doctors took care of men's bodies and the lawyers took care of their

property, and the ministers of religion of their souls, it might be well to extend the Guild to embrace the men of the cloth, and why not? We are all citizens of this glorious republic and the faculties of every man Jack of us should and must be directed to the preservation of the institutions of our country and the maintenance of the sacred traditions and exalted standards of the professions that they may the better serve the people. God bless them!

(Signed) JOHN J. A. O'REILLY, M.D.

June 14, 1920—Flag Day.
405 Union St., Brooklyn, N. Y.
Chairman, N. Y. State Assn. of Medical and Allied Professions. Lecturer, Legal Medicine, Brooklyn Law School of St. Lawrence Univ. Assistant, Dept. Nervous and Mental Diseases, Kings County Hosp.

THE NEW ORLEANS MEETING OF THE A. M. A. NOT GIVEN SUFFICIENT PUBLICITY.

117 West 76th Street,

New York, May 10, 1920.

To the Editor—For the first time in many years a convention of the American Medical Association has not received the publicity usually accorded to the proceedings of this body. It should be important, however, for the public to know that at the session just held at New Orleans this body refused to pass a resolution condemning the use of alcohol in the treatment of influenza. Nevertheless, this fact has been recorded only in the local journals reporting these proceedings, although the previous action of the American Medical Association a few years ago in pronouncing alcohol to be of no medicinal value whatever and only of use in the arts was widely proclaimed throughout the country, if not throughout the world. Likewise the unanimous condemnation of Compulsory Health Insurance was a fact of the greatest importance to the whole medical profession, which has hitherto opposed this measure, although it was fathered and nurtured by the most powerful influences in the American Medical Association. This news should be welcome to the medical profession of England already under a politically imposed form of State Medical Service, and to the English people now threatened with Bone Dry Prohibition.

The fact that the Legislature of New York had just rejected the plan for the compulsory hospitalization or institutionalization of drug ad-

dicts to the exclusion of every other form of treatment though fully presented to the American Medical Association had no evident weight with this body. By condemning the ambulatory treatment of Drug Addiction, it thereby approved this plan in its entirety which was presented to it by the same sponsors whose recommendations and limitations the New York Legislature refused to apply to the fifteen thousand physicians of this State. How this action will be received when known by the 150,000 physicians of the country remains to be seen.

In effect this recommendation implies the inability of the medical profession or of the police power of the State to deal with the problem of drug addiction without invoking the aid of the National Government. American physicians and surgeons have heretofore contributed their full share to the general fund of medical achievement to the benefit of mankind and to the credit of their profession. Must it now be admitted that in the treatment of drug addiction that the medical profession of this country is so incompetent or so untrustworthy that the control and supervision of the importation, manufacture, distribution and prescribing of opium and its derivatives must be the function solely of the United States Government as recommended in the findings of the Narcotic Committee of the American Medical Association? This committee has only studied this subject for one year. It was appointed at the suggestion and of the plans laid down by Dr. Alexander Lambert of New York then just elected President of the American Medical Association. With the exception of the author of this plan none of those recommending it have had any previous knowledge whatever of the disease of drug addiction or any experience in its treatment, either institutional or otherwise.

JOHN P. DAVIN, M. D.

AMEND THE EMPLOYERS LIABILITY LAW

Quincy, Ill.

To the Editor—Our two delegates to the State Constitutional Revision, Messrs. Grey and Six, were here on March 29 and invited all interested to present their views.

I offered an Amendment to the Employers Liability Law together with argument. Copies of these I enclose herewith. If you think they should appear (*mutatis mutandis*) in THE ILLI-

NOIS MEDICAL JOURNAL, well and good. If not you will find postage for their return.

Doubtless many other doctors have had trouble same as I have as to payment for services rendered and rightly chargeable to the employer.

Many other thing medical and which I do not know of should be brought to this convention.

I trust that it will be given the attention it deserves.

Very truly,

April 23, 1920.

H. L. GREEN, M. D.

Occidental Building.

AS TO EMPLOYERS LIABILITY ACT: AN AMENDMENT.

I have here in my hand an excerpt from the *Quincy Journal* of March 24, an editorial on "Rebuilding the Constitution," in which it claims the big idea is "the elimination of the present public utilities law; establishment of home rule for Quincy, and the right to make and enforce contracts." If these premises are well taken I wish for this reason to bring in also The Employers Liability Law for improvement, for amendment.

The objection has been advanced that these matters do not belong to the fundamental law of the state—the Constitution, and hence not to the Constitution builders; but to the statutory law—to the legislature, to the legislators. It would seem that such objection is not properly made. For, in the first instance, matters of contract, and in the second instance, matters of personal rights, are fundamental and hence Constitutional.

In both instances, public utilities commission and Employers Liability Act have much of good in them, but where they or either of them act as an autocratic organization, as stated in the *Journal*, it is not a good thing. And there is the issue, the predicament, viz., impossible to enforce contract, impossible to enforce payment of a doctor's fee.

Section 48, page 1276, article (a) of the Employers Liability Act reads: "The Employer shall PROVIDE first aid, medical, surgical and hospital; and for a period of 8 weeks, not to exceed, however, the sum of \$200. The Employee may elect to secure his own physician, surgeon or hospital services at his own expense."

We would amend this section, article (a) by eliminating the word *PROVIDE* and in its stead insert: BE RESPONSIBLE FOR. And we would amend this article further by inserting after the word "weeks" the words as follows: To wit, AND AT USUAL REGULATION CHARGES ACCORDING TO SERVICES RENDERED DURING THE AFORESAID EIGHT WEEKS, AND NOT TO EXCEED \$500. PAYABLE TO ANY REGISTERED PHYSICIAN OR SURGEON OF STANDARD QUALIFICATION. This would prevent dodging the issue—no matter how or by whom the services might be selected, authorized or directed.

H. L. Green, M. D.

March 29, 1920.

QUESTIONS AS TO HAVING OR WEARING A BEARD

Dear Doctor—In my medical course, I remember hearing a European specialist say in regard to shaving: "Gentlemen, if you interfere with nature, you pay for it." But I am unable to find any scientific investigation of the question. I am seeking, therefore, facts and opinions from physicians. Will you kindly answer, *as soon as possible*, the questions below? I may refer to you by name, but only with your permission. (Kindly let me know.)

1. What are the principal injuries to the skin, which come from shaving and the reasons therefor?

2. What are the general advantages in growing a beard and moustache, and the main reasons therefor?

3. To what extent are the beard and moustache a protection to face, nose and throat, from the incidence of disease in these organs, and the reasons therefor?

4. Does the habit of shaving increase the chances of neuralgic and other troubles of the face, and the chief reasons therefor?

If you prefer, the reasons can be given briefly, but I should be glad to have you write as fully as you can, also please mention any pertinent facts and opinions not covered by the questions.

Thanking you for this trouble, I am,

Very sincerely,

(Signed) ARTHUR MACDONALD.

The Congressional, 100 E. Capitol street.
Washington, D. C.

PERSONAL APPEAL VERSUS RESOLUTIONS

Detroit, June 1, 1920.

To the Editor:—Did it ever occur to you that one way to get a hearing from the powers that be is to come at them as individuals and not by resolution?

Just supposing the Editor and say Dr. Harris, Trustee (if he happens to be one) received fifty letters in one day from a half dozen States, condemning the attitude of the Council on Health and Public Instruction on this question of "Cheap Medicine" as one Michigan man characterized it, when he nominated Dr. McLean of Detroit for President of the State Society. Then supposing in a day or two a hundred letters went in and that continued at intervals; and supposing they looked up these men and they found that they paid their dues religiously but that they were coming to believe that their money was being used to annihilate them, what do you think the Editor, Dr. Harris and the Council would do?

I am sick and tired of resolutions—all talking and no doing as Carlyle puts it. They resolute today and re-resolute something different tomorrow. But the man who will go squarely on record over his own signature is apt to know why and wherefore. Think it over. Dr. Vaughn says that if we all worked, *two* hours a day would do all the work of the world—that *he* belongs to the *proletariat* and that he glories in it—that all we need to bring the boy back to the farm is to establish a nice comfortable hospital run by the University of Michigan in every community."

It is time we stopped talking and if things are not going as the rank and file wish, it is time to right about face. You know as well as I do that it was the element of surprise that put over the A. M. A. Resolution. They didn't think we dared—and the fact that we did, took their breath away. I try never to fool myself and the new cry will be "State Medicine" backed by all the prestige of the Universities and the political pull of the Health Board. "THE SECRETARY."

MISCALLED WELFARE LEGISLATION A REAL MENACE

THE NEED FOR CLOSER INTER-STATE MEDICAL CO-OPERATION

The necessity for closer co-operation between the various State medical organizations will be apparent to you if you have observed the hysteria

which has been running through this country and which is nowhere more manifest than in the "*Miscalled Welfare Legislation*," which has sought to exploit the medical and allied professions, as a line of least resistance, in the hope of arresting or controlling or with the purpose of agitating the unrest which is retarding reconstruction.

Medical men generally, are so absorbed in the exalted work of their calling that they have been veritable children where matters of public moment are concerned; they spend their time, money, and energy in organizing and supporting scientific societies for the benefit of mankind and the advancement of science, and they do not know the first thing about self preservation; the "uplifters" have taken advantage of that scientific absorption and hence we find our legislative body seriously entertaining compulsory health insurance bills, drugless therapy bills, chiropractic bills, and birth control bills, as well as ultra-restrictive narcotic bills and when the medical men show a disposition to rebel and warn the voting public they whip into bill-form two *threats* or alternatives, State medicine and a coercive medical re-registration act which makes possible the revocation of a Doctor's license at discretion through provisions which invest an administrative bureau with punitive judicial powers and without corresponding judicial responsibility.

In New York State we met this condition by going to the people,—our people—in their homes and on the streets, in public halls and in the press, by exhortation and in debate; they believed in our sincerity and voted to defeat those who are antagonistic to or out of sympathy with our efforts to protect the public from vicious legislation under the cloak of "uplift." Result—respectful attention to our protest and the defeat of compulsory health insurance, medical re-registration act with a birth control rider, drugless therapy bill, State medicine bill. While the chiropractic bill passed the legislature, the governor promptly vetoed it, thus avoiding the absurd position in which the governor of New Jersey finds himself, of having signed a chiropractic bill which contains a definition of the cult which reads like a metaphysical.

JOHN J. O'REILLY, M. D.,

Chairman, New York State Association of

Medical and Allied Professions.

405 Union St., Brooklyn, N. Y.

A SUGGESTION REGARDING THE PROPOSED GROUP OF STATE HOSPITALS AND LABORATORIES

Referring to the present agitation on the part of "special pleaders" in behalf of the proposed appropriation of fifteen millions of dollars for the establishment of a group of hospitals and laboratories in Chicago by the state of Illinois: A strenuous effort is being made to enlist the cooperation of the profession of the state, and especially of the city of Chicago, in the matter of bringing political pressure to bear for the purpose of influencing the legislature to make the necessary appropriation. I would respectfully suggest that the sponsors of the project be requested to embody in the wonderful plans and maps that are being exhibited to the profession, a building for the housing of impoverished members of the medical profession, after the state has taken over the practice of medicine—or such of it as is left after certain other eleemosynary (sic) hospitals, free clinics under governmental auspices, county institutions, state dispensaries, and compulsory health insurance schemers, have had their "pickings." IT IS OBVIOUS THAT SOME SUCH PROVISION WILL BE NECESSARY. The confiscation of private interests by Bolsheviki enterprises has become so fashionable that I presume it would be foolish to protest against it, but it would seem that the profession deserves better at the hands of the public than the sort of treatment that has been handed out to brewers, distillers, *et it genus omnes*. I would respectfully suggest that the proposed building should be large enough to house about nine thousand physicians. This is a rather low estimate, but if the proposed arrangement goes through, I am willing to believe that 25 per cent of the profession of the State will be able to adjust themselves to new conditions by virtue and innate capacity for occupations other than the practice of medicine. A few, of course, will be financially so situated that "they should worry." I have no doubt that this latter very small percentage embraces certain prominent members of the profession who, in behalf of the "dear public" professional "uplift," etc., are very enthusiastic in their advocacy of State Medicine, Compulsory Health Insurance, a health officer in the President's cabinet, government control of venereal practice, etc., etc. That those cheap members of the profes-

sion who expect jobs under the new regime belong to "we should worry" class, is so obvious that it hardly requires comment.

IT IS POSSIBLE THAT THE PROFESSION MAY YET BE COMPELLED TO "BLACK LIST" SOME OF THESE SELF-SEEKING "BUNK ARTISTS" WHO ALWAYS ARE SO READY TO SACRIFICE THE PROFESSION FOR THEIR OWN GLORY AND PROFIT. "REFERRED WORK" IS A REALLY FORMIDABLE WEAPON.

G. FRANK LYDSTON.

EMPLOYING DR. LAMBERT

We are in receipt of the following from an officer of one of our sister state societies.

To the Editor: I am quite reliably informed that the council on Health and Public Instruction of the A. M. A. are planning to bring in a report to the Boston meeting against Compulsory Health Insurance but in favor of State Medicine. I am also told on good authority that Dr. Lambert has offered his services to the council in making the survey (as per that fool resolution which was tacked on to the main one) and in formulating a report.

Note:—We cannot answer for the A. M. A. or for its council on Health and Public Instruction. Of this much we feel confident. If the A. M. A. does not at once disassociate from the management or direction of its committees the Lamberts, the Soviet Government propagandists, the practice of medicine by university advocates, the something for nothing boys and the other 47 varieties of near doctors, and the officers of the Association do not keep closely in touch with the needs of the rank and file of the profession, 1921 and 1922 will see new bones drying in the American Medical Association political battlefields.

We say this advisedly because of our familiarity with the sentiment of the profession throughout the United States. Delegates are sorely fatigued at electing near doctors, bureau chiefs, and parlor practitioners to the head of the representative society of the medical profession. This feeling is general.

The representative doctors of the country are determined to make the A. M. A. an organization on the Lincolnian lines "of the profession, for the profession and by the profession," not a

personally conducted autocracy as it has been under the Lambert administration.

Public Health

MORTALITY OF CHILD-BIRTH DURING INFLUENZA EPIDEMIC

The State Department of Public Health has just completed a detailed study of the mortality of women in puerperal state, and of children prematurely born or dying during gestation, on account of influenza or influenza-pneumonia during the recent epidemic which reached its height during January and February, 1920. These figures show that in the State, outside of Chicago, there were 210 such deaths of mothers and 171 such deaths of infants, or a total of 381. During January 54 parturient women succumbed to influenza, and 63 new-born infants died as a result of the disease, a total of 117 for the month. During February 156 women succumbed during child-birth on account of influenza, and 108 new-born children, or a total of 264.

In securing these data, which are regarded as being of distinct statistical value, inquiries were sent to ascertain the circumstances in all deaths of parturient women or children during the two months.

With the exception of Cook county (outside of Chicago) which reported 42 such deaths, Williamson county had the highest mortality with a total of 17. The distribution of deaths was quite uniform throughout the State, there being very few counties in which one or more deaths were not reported.

MOBILE DIAGNOSTIC LABORATORY

The mobile diagnostic laboratory, maintained by the Division of Diagnostic Laboratories of the State Department of Public Health and which was organized for emergency field use something over a year ago, is proving of the utmost value, not only in the suppression of epidemics, but in the rapid and accurate completion of communicable disease surveys. While the cost of transportation and handling of specimens at the Central Laboratory in Springfield has been reduced to the lowest point consistent with prompt and efficient service, these items prove exceedingly expensive when large numbers of specimens are to be examined and, in epidemics, the element of delay in transportation, rendered more serious in the disturbed condition of postal service, is a factor of importance. It is found much more economical and efficient to establish a laboratory in the field where the demands for service are likely to be extensive.

COMMUNICABLE DISEASE IN ILLINOIS

The Division of Communicable Diseases of the State Department of Public Health reports epidemics of smallpox in Brown, Grundy, Knox, Lake, La Salle, Pike, St. Clair, and Stephenson counties during the month of June. Scarlet fever in epidemic form was reported in three school districts in Cook county, and

a rather serious prevalence of typhoid fever in Coles and Douglas counties. Measles has been more prevalent during June than for some time past, with greater incidence than has been noted during that month in recent years.

In Pike county an epidemic of smallpox gained considerable headway on account of the unfortunate announcement made by a physician in a public meeting, to the effect, that the eruptive disease then present was not smallpox, and that there was no occasion for apprehension or for vaccination. During the epidemic of smallpox in Stephenson county an inspector for the State Department of Health found a laborer with severe eruption working with a railroad track crew of over one hundred twenty men.

At Augusta, Hancock county, a town of about 1200, fifty-two cases of whooping cough were reported during a single week.

REPORTING CASES OF TUBERCULOSIS

The State Department of Public Health calls attention to the fact that, in a large number of Illinois communities, the reports of cases of tuberculosis are obviously incomplete. In fact, the reports of venereal diseases, concerning which physicians were formerly very reluctant, are proving far more satisfactory than the returns on tuberculosis. This failure to report tuberculous cases is due, to a certain extent, to the fact that the disease is insidious in its development and does not present itself in well-marked form to the physician as is the case with other communicable diseases. Another reason for incomplete reports, to which the State Department of Health calls special attention, is the failure of physicians, nurses, and private citizens to appreciate the obligation imposed upon them by law. Not only is the physician required to report known cases of tuberculosis, but this obligation is also imposed upon nurses, attendants, householders or other citizens having knowledge of such cases. Nor is the obligation confined to recognized or known cases of the disease. It is also required that physicians, nurses, attendants, householders and others shall report all cases that are suspected as being tuberculosis, and the penalty for failure so to do is a fine not to exceed \$200 or imprisonment in the county jail, or both.

Cases of tuberculosis, as those of other communicable diseases, should be reported to the local health authorities.

BUBONIC PLAGUE IN AMERICA

Bubonic plague has made its appearance in the United States. At the moment, foci of the infection are known to exist at New Orleans, Pensacola and Galveston, and in Tampico and Vera Cruz, Mexico. In Vera Cruz, the disease appears to have assumed the proportion of an epidemic.

"Bubonic plague is primarily a disease of rodents, especially rats, and the disease can be controlled effectively by measures directed against the rat. The extermination of rats is all the more to be desired

because of the tremendous economic damage they cause."

According to conservative estimates made by the U. S. Public Health Service on the basis of numerous surveys, there is at least one rat for every person in the United States. This estimate coincides with that for Great Britain and Ireland, and with authoritative figures for Denmark, France and Germany. The annual up-keep per rodent was computed by the same authorities as \$1.80 in Great Britain, \$120 in Denmark, and \$1.00 in France. The depredations of the rats in the United States will very probably exceed the estimate for Great Britain. One-half a cent a day is considered conservative, but even on this computation, it costs the United States \$180,000,000 a year to support its rat population. This does not include mice.

With the definite knowledge we now possess regarding the transmission of this disease, and especially as to the role played by rats, the situation should cause no alarm or panic among the people of this country. Nevertheless the very real menace of bubonic plague calls for an energetic campaign of extermination directed against the rats, and other rodent pests.

The U. S. Public Health Service has just published a new bulletin entitled "The Rat: Arguments for Its Elimination and Methods for Its Destruction." Copies may be obtained by addressing the U. S. Public Health Service, Washington, D. C.

The State Department of Health is prepared to distribute to all public officials and other interested persons copies of Public Health Bulletin No. 103, issued by the United States Public Health Service, on the reasons for the elimination of rats and approved methods of rat destruction.

INCREASED DEMAND FOR THE CARE OF CRIPPLED CHILDREN

In spite of the prophecy made several years ago, that the clinics for crippled children established by the Division of Child Hygiene and Public Nursing of the State Department of Public Health, would soon reach all of the victims of poliomyelitis and other crippled children needing special care, it is found that the passing of time increases the demand for clinical facilities for these unfortunates and that there is little likelihood of the possibility of terminating this service. With the number of permanent clinics for crippled children throughout the State increased to 27, a definite demand has been made that these clinics shall occupy a full day instead of the half day as in the past. Such demands have recently been made at Princeton, Ottawa, Streator, Quincy, Danville and Joliet, and there is likewise a demand that these clinics be held more frequently than at present.

In meeting the needs of the crippled children located through these clinics, there is now an urgent demand for means of satisfactory hospitalization. For the most part these children are not sick, and consequently the environment of general hospitals is found to be unsatisfactory and depressing for them, while the children themselves constitute a source of annoyance

to other and sicker patients. For these reasons the hospitalization of crippled children in general hospitals does not meet the need. There is little likelihood that the hospital for crippled children provided for through appropriations of the last general assembly will be available until some time in the future, and there are consequently movements on foot for the establishment of institutions through private subscription and individual initiative.

CHILD MORTALITY IN ILLINOIS

The Division of Vital Statistics of the State Department of Health has issued a detailed statement of the mortality of children under five years of age, distributed in all of the counties of Illinois and covering all of the State except the city of Chicago for the first six months of 1919. According to this table, there were 20,925 deaths at all ages and from all causes during the six month period, and of these 4,144, or approximately 20 per cent, were under five years of age. Of this number 2,881 infants died at less than one year of age, considerably over fifty per cent of the total child mortality.

The Division of Vital Statistics, through its recent reorganization and development, is now enabled to engage in extensive special statistical studies which will form the basis of constructive public health activities in Illinois in the future.

HOT WEATHER AND BABIES

Although mothers generally know that summer is a dangerous time for young infants, many do not understand that the heat by itself is one of the chief sources of danger. So much has been said about the care of the milk in hot weather and about the role played by flies in the transmission of diarrhoeal disease that frequently insufficient attention is paid to keeping the infant cool.

The infant's clothing should always be adapted to the weather. On very hot days, the less clothing the better. Usually a diaper and a light slip will answer. The practice of using rubber diapers should be discouraged, for these retain heat and moisture and readily cause trouble.

Frequent bathing is excellent. When tepid water is used it not only cleans the skin of offensive and irritating perspiration, but cools the body and improves its tone.

Overfeeding should be avoided. Experience has shown that excessive hot weather reduces the tolerance for foods. The mistake is often made of relieving the infant's thirst by excessive quantities of milk. Mothers should remember that in hot weather infants require water to drink in addition to their milk feeding.

Out of doors in the shade is usually the best place for infants in hot weather. But care should be taken in the choice of places, and at times it may be that the infant can be made more comfortable in a room with the blinds closed.

For those who can afford it, a small electric fan may prove a life-saver for the baby. The beneficial influence of keeping the air in motion is well established.

Although always important, scrupulous cleanliness in caring for infants is absolutely imperative in hot weather. Diapers should be changed promptly. Soiled diapers should always be boiled and thoroughly washed before being used again. It is important not to allow the baby's skin to become irritated and infected from delay and carelessness in changing diapers. A few minutes spent in sponging and then carefully drying may save much trouble and anxiety.

Breast feeding is still one of the most important preventive measures against summer diarrhoea, and all mothers should be impressed with this responsibility to their little ones.—*From U. S. Public Health Service, Washington, D. C.*

THE HIGH COST OF LIVING—THE SIX-HOUR DAY AND MOUNTING PAY

At the Wilkes-Barre convention of delegates representing mine workers employed in three anthracite districts of Pennsylvania these demands were made:

New contracts to run no longer than two years. Individual agreements and contracts in mining prohibited. Increase of sixty per cent. in wages above the scale provided by the supplemental agreements of 1917 and 1918. Increase of \$2.00 a day for day men. Uniform wage scale. Work day of not more than six hours from bank to bank for all classes of inside and outside day labor and monthly men. Five days a week, time and a half for overtime and double time for Sundays and holidays. Union shop, with full recognition of the United Mine Workers of America as a party to the agreement.

American miners are evidently determined not to be outdone by their British brethren. If the profits of capitalists are also to keep pace with this new system of under-production and climbing wages we can readily see where all must end in the very near future.

ANOTHER STRIKE!

The lunatics are all as mad as can be,
They're raving and running amuck;
Their disturbance has all of the others outclassed,
For the movement has reached the asylum at last,
And all of the inmates have struck!

The maniacs fight with their might and main,
The Bedlamites jump from their beds;
The Insanity Union has uttered this threat:
Unless their demands are instantly met,
They'll tie up every wheel in their heads.

—*The Idiot.*

Society Proceedings

Illinois State Medical Society

OFFICIAL MINUTES OF THE SEVENTIETH ANNUAL MEETING

MINUTES OF THE MEETING OF THE HOUSE OF DELEGATES

HELD AT ROCKFORD, MAY 18-20, 1920.

Tuesday Evening, May 18, 1920

The meeting convened on Tuesday evening, May 18, 1920, at the Elks' Club, Rockford, Illinois, President J. W. VanDerslice presiding.

The Chairman: We will call for a report of the Credentials Committee.

Dr. Gilmore presented the report of the Credentials Committee. The report was accepted, and having found a quorum to be present, the House of Delegates was declared to be in session.

Dr. Price (Robinson): In lieu of reading the minutes of the last meeting, I move that the minutes be approved as printed in the JOURNAL. (Seconded and carried).

Dr. Gilmore, of Mt. Vernon, read his report as Secretary of the Illinois State Medical Society.

SECRETARY'S REPORT.

Gentlemen of the "House of Delegates:" Your Secretary begs to report the collection of the following sums from all sources for the fiscal year of 1919 and from Jan. 1 to April 30 of the current year. The first amount read being for the fiscal year and the second being for the four months of the current year:

	1919	1920
Adams	\$ 151.00	\$ 198.00
Alexander	63.00	66.00
Bond	30.00	
Boone	48.00	39.00
Brown	23.00	24.00
Bureau	75.00	67.00
Calhoun		
Cass	57.00	
Carroll	67.50	
Champaign	208.00	189.00
Christian	111.00	
Clark	54.00	65.00
Clay	45.00	39.00
Clinton	50.00	48.00
Coles-Cumberland	103.00	115.00
Cook	8,862.00	9,600.00
Crawford	76.50	69.00
De Kalb	134.50	69.00
De Witt	63.00	41.00
Douglas	68.50	60.00
Effingham	73.00	
Edgar	78.00	72.00
Edwards	17.50	18.00
Fayette	21.00	
Franklin	79.50	36.00
Fulton	122.00	18.50
Gallatin	52.00	24.00
Greene	98.00	93.00
Grundy	38.50	
Hamilton	34.00	30.00
Hancock	58.50	27.00
Hardin	6.00	
Henderson	24.00	24.00
Henry	143.50	108.00

Iroquois-Ford	152.00	117.00
Jackson	101.00	93.00
Jasper	35.50	36.00
Jefferson	68.00	63.00
Jersey	58.00	24.00
Jo-Davies	62.50	6.00
Johnson	36.00	
Kane	330.50	261.00
Kankakee	178.00	120.00
Kendall	27.00	
Knox	152.00	78.00
Lake	143.50	
La Salle	402.50	220.00
Lawrence	67.00	27.00
Lee	46.00	95.00
Livingston	121.50	
Logan	28.00	109.50
McDonough	92.00	96.00
McHenry	88.00	102.00
McLean	234.50	165.00
Macon	260.00	234.00
Macoupin	111.00	131.50
Madison	316.00	279.00
Marion	153.00	93.00
Marshall-Putnam	32.00	33.00
Mason	62.50	48.00
Massac	36.00	42.00
Menard	27.50	11.50
Mercer	56.50	58.50
Monroe	6.00	24.00
Montgomery	135.00	93.00
Morgan	168.50	122.50
Moultrie	11.00	39.00
Ogle	87.00	
Peoria	432.00	213.00
Perry	56.00	
Piatt	24.00	41.50
Pike	92.50	95.50
Pope	14.00	
Pulaski	38.00	21.00
Randolph	78.00	54.00
Richland	53.50	
Rock Island	272.00	173.50
Saline	70.00	
Sangamon	336.00	300.00
Schuyler	28.50	18.00
Scott		12.00
Shelby	74.50	36.00
Stark	59.50	3.00
St. Clair	366.00	345.00
Stephenson	144.00	153.00
Tazewell	129.50	12.00
Union	77.00	51.00
Vermilion	186.00	123.00
Wabash	40.00	8.00
Warren	50.00	143.50
Washington	45.00	
Wayne	119.50	32.50
White	54.00	54.00
Whiteside	72.50	97.50
Williamson	102.00	111.00
Will	160.50	75.00
Winnebago	257.50	177.00
Woodford	63.00	36.00
Subscriptions	52.00	35.25
Exhibits	680.00	330.00
Refund	6.29	
Total	\$19,254.29	\$16,712.25

For the fiscal year of 1919, 156 voucher checks were drawn for a total of \$20,803.96, divided as follows: General expense, which includes the JOURNAL, \$16,556.35; medical defense, \$3,437.54, and legislative fund, \$810.07.

For the first four months of the current year 72 voucher checks have been drawn for a total of \$14,803.44; \$10,720.41 was for general expense, \$3,534.12 was for medical defense and \$548.91 for legislative work.

Since the 69th annual meeting, 667 new members have been added to the membership, 249 reinstated, 664 dropped for non-payment of dues and 65 have died. The membership of the Illinois State Medical Society May 1, 1920, being 6,920.

Your secretary has attended all of the meetings of the council and the usual number of component societies. The condition of the organization is good with a few exceptions. It becomes increasingly dif-

difficult to maintain interest in the small isolated counties and I am still of the opinion that in these cases they should become part of a large healthy organization in the immediate vicinity. The tendency for men to congregate in the larger centers is true in the medical profession as well as in other walks of life and there are many small towns in Illinois without doctors where, before the World War, there were two or three. The condition in Marshall-Putnam Society is typical of this fact, the details of which will be given you by Dr. E. S. Gillespie, councilor for the second district.

In assuming the office of secretary in 1913, we found that the bills for the past year had not been paid until the annual meeting, which left the Society overdrawn in its general fund. Since that time all large bills are gotten out of the way at the April meeting of the council and the figures given above as well as the balance, which will be read by the treasurer is not covered by outstanding accounts.

This is the last report I shall ever read to the Society as its secretary. You have honored me for the past seven years, but I feel that my personal interests have reached the stage when I can no longer either with justice to the Society or myself be a candidate for re-election. I shall always be glad that I held the office when our country entered the World War, for while it entailed an enormous personal effort, I was more than happy to do my bit before putting on the olive drab for some twelve and one-half months. I also desire to thank you for my re-election at Peoria last year, for your action showed your confidence although I was four thousand miles away, during the annual meeting. I also wish to express my appreciation for the unfailing courtesy of all the officers and members of this Society shown Mrs. Gilmore when she was acting in my capacity while I was in service.

Respectfully submitted,
W. H. GILMORE, Secretary.

It was voted, on motion of Dr. Little, of East St. Louis, duly seconded, that the report of the Secretary be approved.

The Chairman: We will next have the report of the Chairman of the Council.

Dr. Burkhart read the report of the Chairman of the Council. He said he would send in his report later.

REPORT OF THE COUNCIL

Mr. President, Delegates, Ladies and Gentlemen:

As Chairman of the Council of the State Society, I beg leave to read and submit the following annual report of the Council for your consideration.

At the first meeting of the Council, immediately following the adjournment of the House of Delegates, the Council was organized for the year by the election of C. F. Burkhardt as Chairman. It is now composed of eleven Councilors, two being added to

the Third (Chicago) District, by the last House of Delegates.

There have been five regular meetings during the year.

The rule which your Council has endeavored to follow in its executive capacity, has been the careful conservation of the State Society's funds, so far as it was consistent with efficiency and progress.

The Council during the year has deemed it necessary to create a new committee, known as the Council's Committee on Medical Legislation. This was believed to be necessary on account of the fact that in many instances the Legislative Committee of the State Society desires the advice and co-operation of the Council, and as it is impracticable to get the whole Council together, it was though advisable to have a special committee to handle the matter. Dr. C. S. Nelson is Chairman of this Committee.

The question of the efficient opposition of the Illinois State Medical Society to medical legislation which may be pernicious to the public health, or the Society's individual members, is one of paramount interest; and as a State Society, if we should become lax in our duty in this particular, we will surely regretfully reap its dire consequences, which we believe would result in greatly lowering the standard of medical education and the efficiency of the profession in the State, and furthermore materially injure every reputable member of the medical profession. Your Council believes that practically every pernicious legislative measure can be defeated if handled vigorously, and if the fight is backed up by an aroused and united membership. As a vivid illustration of this fact, you will remember what a wonderful and glorious defeat our Society administered to the Annual Registration Bill.

Considering how vital this phase of the State Society's work is to our existence as a medical profession, too much stress can not be placed upon it. Therefore the Council believes that great care should be exercised by the House of Delegates in their selection of members of the Legislative Committee; and owing to the fact that the Council has more time to discuss and deliberate upon the especial fitness of those to serve on said committee, we believe there should be an amendment to the constitution, requiring the Council to nominate the members of said committee, to be elected by the House of Delegates, and that said Legislative Committee be given full power to act in legislative affairs.

During the year, the Council also appointed a special committee to look after the interests of the State Society in the State Constitutional Convention at Springfield. This Committee, which is composed of Dr. C. E. Humiston, Dr. J. W. VanDerslice and Dr. H. P. Beirne, has rendered very efficient service, especially Dr. Humiston, who was in the work some months before the last two were appointed. We will perhaps have a report from Dr. Humiston during this meeting.

Considering the extraordinary period in which we are living, and the extremely high cost of everything,

especially wages and printing materials, we think the Illinois State Medical Society has good reason to feel some elation over its year's showing, as evidenced by this report.

At the regular meeting of the Council held in Chicago, in June, 1919, Dr. Charles J. Whalen was elected Editor, and Dr. Henry G. Ohls was elected Managing Editor of the JOURNAL. Dr. Whalen assumed his duties as Editor with the August number of the JOURNAL.

The total cost of printing the JOURNAL this year is \$11, 922, and the total cost of printing the JOURNAL last year was \$8,709, therefore the cost of printing the JOURNAL this year is \$3,213 more than last year.

The total amount received for advertising space in the JOURNAL this year is,

Cash Collected\$14,391.26
In good accounts which are due and unpaid. 1,728.95

Making a total of.....\$16,120.21

The total amount received for advertising last year was approximately..... 10,500.00

Making the net increase in advertising income over last year of.....\$ 5,620.21

The total amount of new advertising secured for the JOURNAL since August, 1919, is \$9,657.

The following shows the total cost of printing and editing the JOURNAL:

Total cost of printing for 12 months 88,400
copies\$11,922.00
Editor's salary 2,000.00
Managing editor's salary..... 1,054.00
Commissions on advertising 1,237.92
Exchange 9.60
Postage, approximately 780.00
Stenographer's salary and office expenses... 820.00

Total cost of JOURNAL.....\$17,823.52

Income of JOURNAL from advertising.....\$16,120.21

Leaving the total net cost of JOURNAL..... \$1,703.31

This makes the JOURNAL cost the Society a fraction under three cents per copy for the year.

Total balance in General Fund of State

Society\$13,238.00

Total balance in Legal Defense Fund (\$5,000 in Liberty Bonds) 16,689.17

Total balance in Legislative Fund..... 3,523.63

Grand total balance in hands of State Treasurer\$33,450.80

There should be added to this:

Amount collected 175.00

Amount to be collected during this meeting (approximately) 1,000.00

\$34,625.80

We believe the above figures to be approximately correct. It is impossible to get them exact, on account of the difficulty of reaching different officials,

and the interval of time which elapses between the date of my receiving the data and this meeting.

The total membership of the Society is 6,920, and the net increase for the year is 189.

C. F. BURKHARDT,
Chairman of Council.

It was voted, on motion of Dr. Rice, of Quincy, that the report of the Chairman of the Council be adopted.

The Chairman: We will now have the report of the Treasurer.

Dr. Markley, of Belvidere, read his report.

TREASURER'S REPORT.

May 19, 1919 to May 17, 1920.

GENERAL FUND.

May 19, 1919, Balance on hand.....\$ 8,647.06
Receipts: W. H. Gilmore.....\$11,655.29
ILLINOIS MEDICAL JOURNAL.... 13,028.73 24,684.02
Total\$33,331.08
Vouchers cashed 20,093.08

Balance on hand.....\$13,238.00

MEDICO LEGAL DEFENSE FUND.

May 19, 1919, Balance on hand.....\$14,783.66
Received of W. H. Gilmore..... 6,992.75
Vouchers cashed 5,087.24

Balance on hand\$16,689.17

LEGISLATIVE FUND.

May 19, 1919, Balance on hand.....\$ 1934.41
Received of W. H. Gilmore..... 3,355.50
Vouchers cashed 1,766.28

Balance on hand.....\$ 3,523.63

It was voted, on motion of Dr. Way, of Chicago, that the report of the Treasurer be adopted.

The Chairman: We will now hear the report of the Councilors. First, the Councilor from the First District, Dr. Crawford.

COUNCILOR REPORT, FIRST DISTRICT

Dr. C. E. Crawford: *Mr. President and Gentlemen:* I have a very short report, owing to the fact that I have been Councilor but a short time. During that time, it has been my pleasure to visit every county in the district, and on each visit I have advised and talked with the physicians in the district regarding closer affiliation with the District in matters pertaining to the

advancement of the Illinois State Medical Society. I feel sure that as the result of my predecessor's work, Dr. Windmueller, that there is a very favorable impression over the District regarding the State Medical Society, also the local Society. We have had no disagreements to settle, we have had no quarrels, but the attitude of the members of the First District is to do what they can, what is in their power to advance the interests of organized medicine.

I want to say further that when the obnoxious Registration Bill was up, I appealed to every County Society in the State to go on record against that bill, and not one was found wanting. There is a better feeling there in the First District than there has been for years.

The Chairman: You have heard the report. It will stand approved if there is no objection. The next is the report of the Third District, Dr. McNeill, of Chicago.

COUNCILOR REPORT, THIRD DISTRICT

Dr. S. J. McNeill: We have an increase of membership in Cook County of 230, making a total membership of 3,450. On the other counties, I have not any exact report, but I must say the Chicago Medical Society has had more scientific papers read in the past year, has done more work against obnoxious bills than ever before. I can't say how I appreciate what our committee has done on the Constitutional Convention at Springfield. (Approved).

The Chairman: Next will be the report of the Fifth District by Dr. Nelson.

COUNCILOR REPORT, FIFTH DISTRICT

Mr. President and Gentlemen of the House of Delegates:

Your Councilor of the Fifth District is unable to make as complete a report as he would like, owing to the fact that the Secretaries of a few of the County Societies have neglected to reply to their Councilor's request for information.

The strongest or weakest spoke in the wheel (as the case may be), of a County Medical Society, is the Secretary, and I will say for the benefit of the Delegates of my District especially, that they should see that the most energetic and wide-awake member, who will not shirk a duty of any kind, should be elected Secretary. One of these duties should be, prompt replies to requests for information pertaining to the best interest of the Medical Society, whether that request comes from the Councilor, Legislative Committee, or any member of the profession.

I have always tried to impress upon the physicians

of my District, the importance of complete organization, and believe this spirit prevails in, at least ninety per cent. of the physicians.

Judging from reports I have received directly and indirectly, the membership in my District has increased about ten per cent. in membership during the past year, which is a very healthy growth considering the fact that there are comparatively few eligible physicians in the Fifth District, who are not already members of their respective Societies.

The Fifth District is comprised of nine counties and eight Societies, namely, Iroquois-Ford combined, Sangamon, Menard, Mason, Logan, Tazewell, McLean and DeWitt. The Secretaries who have favored me with replies to my request for information, are from the counties of Sangamon, Tazewell, Mason, Menard and Logan. The Secretaries who have neglected these replies, are from the counties of McLean, DeWitt and Iroquois-Ford.

Your Councilor has attended every meeting of the Council during the past year, and in conjunction with the other Councilors, has endeavored to work for the best interests of the Illinois State Medical Society. Whether or not we have succeeded in our work, will be left to your judgment, after hearing the report of the Chairman of the Council, and the Editor of the JOURNAL.

Respectfully submitted,
C. S. NELSON, M. D.,
Councilor, Fifth District.

The Chairman: If there is no objection, the report is approved. We will next have the report of the Sixth District by Dr. Beirne.

Reading of report:

COUNCILOR REPORT, SIXTH DISTRICT

The Sixth District composes the counties of Adams, Pike, Calhoun, Madison, Green, Macoupin, Brown, Cass, Scott and Morgan. This District has a component society in each county, except one, all of which are live, energetic societies holding regular meetings. I have visited several of the Societies from time to time and found the members alert to the social, economic and scientific demands of our profession, and when called upon to kill vicious legislation responded nobly, and gladly assisted in putting over any measures that would advance the interests of our profession.

There has been developed in my district a strong sentiment against the workman's compensation act, as now enforced, state medicine in the form of clinics, and other activities tending to usurp the powers and rights of our profession.

Considered as a whole the profession in the Sixth District is in a very healthy condition.

H. P. BEIRNE,
Councilor Sixth District.

The Chairman: The report will be accepted, if there is no objection. We will next hear from

Councilor C. F. Burkhardt, of the Seventh District.

SEVENTH COUNCILOR DISTRICT

To the House of Delegates: The conditions in the Seventh District during the past year have remained about the same as they were during the previous year. I have made two councilor visits. One County, Moultrie, was revived. I have attended all meetings of the Council during the year with the exception of one, and was prevented from attending this meeting on account of illness.

Respectfully, C. F. BURKHARDT.

The Chairman: The report will be adopted if no objection is raised.

The next is the report of C. E. Price, of Robinson, Councilor for the Eighth District.

Reading of report:

COUNCILOR REPORT, EIGHTH DISTRICT.

The Councilor from the Eighth Councilor District begs to submit the following report to the House of Delegates:

I have attended all of the Councilor meetings during the past year, have made two visits to Jasper County and got the Jasper County Medical Society in good working order, after a lapse of more than two years without a meeting. I am sure they are going right along now, for they showed a good spirit and have a good set of officers that will make it go.

Richland County has regular meetings; they keep their dues paid to the State Society. I have not visited the County.

Lawrence County has a county organization, but do not meet regularly and the Society is not in as good a condition as it should be for they have a number of good men down there.

The other counties in the Eighth District are all in good shape and having regular meetings; at least I have heard of nothing to the contrary.

I have been advised of the following deaths during the year from members from the Eighth District.

N. F. Lindsay, Robinson, Ill., following a lingering illness of cancer of the head of the pancreas; this was found on autopsy. He was 70 years old and had practiced medicine in Lawrence and Crawford Counties for 45 years.

J. A. Emmons, Pinkstaff, Ill., a comparatively young man, died after a few days illness from some brain lesion.

Henry T. Watkins, Olney, Ill., had been in poor health for a number of years. Died on the train near Washington, Ind.

John Harrell Maxwell, Newton, Ill., was a civil war surgeon. Died at his home in Newton, nearly 60 years of age.

J. W. Evinger, near Paris, Ill., died last winter. Was unable to get any of the particulars.

I do not want to make any recommendations to the

House of Delegates, but it seems to me that some concerted action by this body would be good in the way of recommending Article 300, which has been proposed to the Constitutional Convention. If no such article gets into the new constitution and the medical profession is compelled to fight the Legislature as regularly as it convenes, for their rights, then I believe that no better money could be spent by this Society, than to employ a paid lobbyist, one who is in sympathy with and who knows the needs of the profession, if such a man could be found. At least I am sure that some more efficient method must be employed, than that which we have had, but not contented with or as I have often thought that it would probably be the best to do nothing and let the legislature carry their medical legislation to the limit, so that the people might become disgusted and ask that the cults be cut out. The profession has always been on the defensive, and that is the hard side to carry.

Since I have been a member of the Council I have realized what the Legislative Committee had to contend with and how utterly impossible at all times and often the most important time, it is for the Committee to get their forces together and do efficient work but if the new Constitution would provide for a good definite article for all time to come, this would be the happy solution of a big problem.

Another thing, the profession of Illinois does not want to lose sight of, is State Health Insurance. To my way of thinking, if there is any one place, or any one thing that the profession should deal a united and forceful blow, should the time ever present itself, it is to State Health Insurance. You should always read every article in the JOURNAL or any other Journal, on this subject, for Dr. Whalen will lead you aright. Of the many subjects that the physician should know about, for his own good, this is the paramount one.

From the number of bills introduced in Congress that would effect the Medical Profession and are enumerated in a recent issue of the JOURNAL, it would be well to keep your eye on the East.

Respectfully submitted,

C. E. PRICE,

Councilor from Eighth District.

The Chairman: The report will be accepted if there is no objection.

The next will be the reading of the report of Dr. C. W. Lillie, of East St. Louis, Councilor of the Ninth District.

Reading of the report:

COUNCILOR REPORT, NINTH DISTRICT.

There has been but little change in the conditions in the Societies of the Ninth District during the last year. The return of a number of those in the U. S. Army a year ago has put new life into some of the Societies. Some others seem to have passed

into a state of semi-lethargy from which it is difficult to arouse them.

From all reports there has been a better professional spirit manifested than had prevailed for some time before, and a high degree of efficiency is shown by the greater interest in the work of organized medicine, an interest which is now the most essential feature of our profession, and in this connection I would make a special appeal to the membership to use every possible means to have every eligible physician become a member.

The gain in membership during the year has not been great, not more than three per cent., some counties losing while a few have shown marked increase.

Reports of Secretaries have been very slow in coming in, and this gives me occasion for repeating my request, previously made by personal letter to each Secretary, to send the reports at the earliest possible time, so that the Councilor's report may be prepared in time for the annual meeting.

C. W. LILLIE.

Councilor Ninth Councilor District.

The reports of the other districts were called for, but no one was present to represent them.

The Chairman: The report of Dr. Lillie is accepted. We will now hear the report of the Editor, Charles J. Whalen, of Chicago.

Dr. Whalen read his report:

REPORT OF THE EDITOR OF THE ILLINOIS MEDICAL JOURNAL.

In these times of high cost of living, of unusual political and social unrest and general dissatisfaction throughout the world, it is a pleasure to be able to report that the various activities of the JOURNAL are progressing by leaps and bounds and that so far as your publication is concerned the year has been one of the most satisfactory in its existence.

A detailed statement shows that five issues of the JOURNAL contained 96 pages (as in the previous year). One issue contained 112 pages and six issues contained 128 pages. Expressing it in terms just a little different, but meaning the same thing we published 33,850 96 page JOURNALS; 8,000 112 page JOURNALS; and 44,550 128 page JOURNALS. A total of 88,400 copies printed from June, 1919 to May, 1920, inclusive. This represents an increase of 6,825 copies over the previous year, and shows an average monthly output of approximately 7,400.

The 6,825 extra copies together with the increase in size of the JOURNAL from 96 to 128 pages represents a total of 9,921,600 more pages of reading matter printed than during the previous year. This increase has taken place since November, 1919, a remarkable showing considering the exceptional increase in the cost of paper, labor, etc., and the upset condition of business affairs generally.

Advertising—In connection with advertising your editor has an apology to offer. This report does not fully represent the editor's contributions to the

advertising columns of the JOURNAL. When he took over the editorship and management of the JOURNAL he was handicapped at the outset because of the fact that as President of the Illinois State Medical Society (1914) due to the depleted condition of the treasury he was obliged to help provide funds with which to guarantee continued publication of the JOURNAL. Confronted with this emergency he secured upwards of \$5,000 in advertising contracts. Many firms that he induced to join the JOURNAL's advertising columns at that time have remained continuous advertising patrons to the JOURNAL through the intervening years.

In spite of this the advertising department makes a remarkably good showing. Seventy-four new firms and individuals have joined our advertising columns since last August, this number is in contrast to 68 advertisers in the JOURNAL when the new editor took over the management; this represents an increase of 109 per cent. in numbers of new advertisers. New contracts for upwards of \$11,000 have been written since August, 1919, an increase of 121 per cent. At the time your editor took over the JOURNAL we had in force advertising contracts amounting to \$9,118, today we have in force upwards of \$21,000 in advertising contracts. This sum is exclusive of the amount paid on subscriptions. Most of the contracts were written late in 1919 and up to May 1, 1920, and inasmuch, as the payments are pro-rated and paid in monthly installments the new contracts have only moderately increased this year's income, but they will enhance materially the revenue for the coming year. For the first time in the JOURNAL's history the contracts in force represent an income in excess of the expense of publishing the JOURNAL. Putting it another way for the sake of emphasis for the first time in its history the JOURNAL is self sustaining.

Naturally, the larger the circulation of a periodical and the more recognition and attention that can be attracted to it the more valuable it becomes as an advertising medium and the higher is the rate for advertising space it commands. Because of a live interest in the JOURNAL, business firms have been very liberal in advertising during the last year. It is perhaps needless to add that we are keeping our advertising up to the standard and if possible improving it in every way. All told, the past year has been one of great prosperity for the JOURNAL.

Complaints—Many complaints have been received of failure to receive the JOURNAL. This has been especially conspicuous during the present year. Your editor desires to record the fact that failure in delivery of the JOURNAL to every member each month is in no way the fault of the editor's office, but is due to lack of sufficient force in the postal service. The mailing list is carefully revised and checked each month, and every possible effort is made in order that a copy of the JOURNAL properly addressed is put into the mail each month to every member.

Increased Expenses—The steadily increasing cost of production is likely to cause serious concern if it continues much longer. As an illustration we might

refer to the scaracity and price of paper used in the JOURNAL. The cost of paper shows an increase of over 100 per cent. in a very short time; wages and other materials used in the printing trade have advanced proportionately.

While there is no immediate cause for becoming pessimistic, nevertheless, it is well for us to realize that we must be prepared for whatever the future may have in store. There are many ways in which the members can co-operate to help keep down the cost of publication. This co-operation is very much desired by the council, the editor, and all officers upon whom the successful management of the affairs of the Society depend.

The Chairman: This report will be accepted, if there is no objection.

The report of the Medical Legislation Committee was called for next, but the Chairman was not present. The report of the Committee on Public Policy was also called for, and the Chairman was not present.

The Chairman: The report of the Medico-Legal Committee.

REPORT OF MEDICO-LEGAL COMMITTEE

Dr. C. B. King: At the time of the report last May, there were pending fifty-seven suits. Since May 15 a year ago, there have been thirty-four new suits filed, and we have disposed of thirty in that time, which is an increase of four suits filed over those that were disposed of.

At the present time, we have sixty-one suits pending, and during that same period there have been claims made in which no suit as yet has been filed numbering forty-four, making a total of seventy-four claims and suits in the last twelve months.

Aside from the thirty-four cases that have been permanently disposed of, there have been three cases in which the verdict for the defendant was taken to the Appellate Court by the plaintiff. That is the first instance of that kind that has come up since I have been on the Committee. One case in which there was a finding for the plaintiff of six thousand dollars, a new trial has been granted. Another case that seemed rather hopeless, we managed to get out of with a hung jury, and that case will be up again in a couple of weeks when we are hoping for better results. There have been no judgments that have stood in the last year.

The expense of the Medico-Legal Committee this past twelve months have been considerably

greater than for the preceding twelve months. I have the figures here for the past four years, if you care to hear them. In the year 1917, it was \$4,602.17; the year of 1918, it was \$6,544.66; in the year 1919, the public seemed to have taken a little pity on the poor doctor and we weren't up against things quite so hard; that year the expense was \$2,798.84; but again this year they seem to think that since the fees have gone up a little that we have plenty of money and they begin to come at us a little harder—\$6,674.34 have been the expenses of the past year. You will see from these figures and the report of the Treasurer a few moments ago that we are still living just within our income. The income last year, I believe, exceeded the expense by about \$300.00. Now, it is the hope of all of us that with the fund we have that the committee will not have to come to the House of Delegates and ask for any more money per capita. At the present time, one dollar per year has been carrying all of our expense and has built up a fund during the past year, but you can see from the figures of the past year that we can't keep that up very much longer.

The Chairman: The report will be accepted if there are no objections raised.

The report of the Committee on Medical Education was called for, but no one was present to present it.

The Chairman: The next will be the report of the Committee on the Constitutional Convention, Dr. C. E. Humiston, of Chicago.

The report was read by Dr. Humiston:

REPORT OF COMMITTEE ON CONSTITUTIONAL CONVENTION

Your Committee on Constitutional Convention hereby submits the following report:

The Committee, appointed by the Council at its January meeting, caused to be introduced into the Constitutional Convention the following, known as proposal number 300:

CONSTITUTIONAL CONVENTION

No. 300.

1. Introduced by Mr. Lohman (by request), Feb. 27, 1920.
2. Read first time, ordered printed and referred to Committee on Miscellaneous Subjects, March 2, 1920.

A PROPOSAL

To authorize the General Assembly to enact laws relative to health.

RESOLVED, That the following shall become a part

of the Constitution of Illinois: SECTION —. The health of the people is essential to the welfare and perpetuity of the State. The General Assembly may enact laws to preserve and safeguard the health of the people and to impose licenses upon those undertaking to treat or cure the sick or infirm, or to preserve from sickness and infirmity persons within the State. No power shall exist to impose hereafter any terms or restrictions or give power to any persons to treat or undertake to treat any ailment, infirmity or disease of another for pay, reward or compensation upon any different terms, limitations, qualifications or prerequisites, from those granted or limited to every other person or persons who may hereafter be licensed to undertake to treat or cure the sick or infirm, or to preserve from sickness or infirmity persons within the State.

This proposal was drawn up by its attorney for the society and is intended to deny to the General Assembly the right to license quacks, charlatans and faddists to prey upon the sick of Illinois. That something of this kind is needed in the Constitution is evidenced by the fact that the Christian Scientists claim to have a constitutional right to treat the sick, and that this contention has been repeatedly upheld by the courts in many states.

Two members of your committee together with Attorney George M. Bagby and Dr. Honn, of Champaign, representing the State Homeopathic Medical Society appeared before the "Committee on Miscellaneous Subjects" to which committee proposal No. 300 had been referred, and advocated making this proposal a part of the new Constitution. Judge Hill, of Canton, Ill., representing the Christian Scientists, spoke in opposition and he was supported by Dr. F. S. Whitman, of Belvidere, a member of the Constitutional Convention.

The matter is still before the Committee on Miscellaneous Subjects.

Your Committee from the beginning has made it clear to the Constitutional Convention that it does not insist upon the exact wording of the proposal No. 300. In fact has requested that it be rewritten if necessary or a substitute be adopted. Two substitutes have been placed in the hands of a member of the committee with instructions to use his discretion. One of these substitutes asks only that the one word "health" be inserted in Article II, Section 3, Bill of Rights. Any one of these proposals is No. 300.

The large number of uninformed and uneducated yet legalized mercenary persons now gambling with human life is eloquent and pathetic appeal to the Constitutional Convention to insure to the people that measure of protection which a sane and civilized state owes to its citizens, and this is the sole object of Proposal No. 300.

H. P. BEIRNE.

Dr. Rice (Quincy): I move the adoption of the report. (Seconded).

The Chairman: The Chairman desires to

state, as a member of this Committee, that any question for more knowledge or enlightenment about the stand of the Committee and the reasons for believing this is an advancement in medical education will be accepted by this Committee without prejudice. There has been more or less propaganda through the state because of the fact than an ex-President of this Society has opposed it, and because both medical members of the Constitutional Convention, in fact, have opposed. There may be two definite sides to the question, and I want every member here to feel perfectly at liberty to ask any question without feeling that there will be any embarrassment whatever to any one asking such a question.

Dr. Lillie (East St. Louis): It appears to me that the delegates who are present here may wish to know exactly on what grounds there has been opposition by the two physicians in the Constitutional Convention. I for one would like to hear the explanation.

The Chairman: If either of those gentlemen are present, or if anyone has a brief for either one, we will be glad to hear from them. Is there any question that anyone cares to ask?

Mr. Beirne (Quincy): Since the opposition doesn't wish to express itself and this is the first opportunity that this House of Delegates has had to take a stand upon this matter and to give the Committee its moral support, I move you an amendment to the motion that this be adopted, that our Secretary be instructed to send a copy of this resolution to the Chairman and the Secretary of the Miscellaneous Committees, so that they can go on record and they will know where we stand.

The amendment was accepted and the motion carried as amended.

The Chairman: There is a report from the Committee on Hospital Standardization.

Reading of the report by Dr. Hunniston:

REPORT OF COMMITTEE ON HOSPITAL STANDARDIZATION

The Committee on Hospital Standardization on account of inadvertent delay in its appointment has not been able to accomplish the results that greater time would have permitted. However, many statistics have been collected and the foundation has been laid for increased activity should the House of Delegates see fit to continue the work of the committee.

The members of the committee have co-operated with the Illinois Hospital Association in the controversy with the Department of Registration and Edu-

cation on the nursing problem. An interpretation of the Illinois Nursing Act by the Attorney-General has been secured which should prove of great benefit to the hospitals and training schools. This opinion appears in the May number of the ILLINOIS MEDICAL JOURNAL.

The following curriculum for a two year course of instruction in training schools is suggested.

The Committee recommends that the name of the "Committee on Medical Education" be changed to the "Committee on Medical Education and Hospitals" and that all matters concerning hospitals hereafter be referred to this committee. This action will be in harmony with the action of the House of Delegates of the American Medical Association taken at the 1920 session. The State Society in order to deal effectively with the hospital question must co-operate with the other state societies which together make up the American Medical Association.

Respectfully submitted,
CHAS. E. HUMISTON.
M. L. HARRIS.

FIRST YEAR.

First Semester—September to January.

	Hours
Practical Nursing	64
Anatomy	10
Hygiene and Bact.....	10
Ethics and History of Nursing.....	4
Total	88

Second Semester—January to June.

Materia Medica	10
Physiology	10
Internal Medicine	10
Surgery	10
Laboratory Tech.....	4
Communicable Diseases	6
Total	50

SECOND YEAR.

First Semester—September to January.

	Hours
Dietetics	12
Op. Room Tech.....	8
Obstetrics	10
Gynecology	8
Nervous and Mental	4
Skin and Venereal	4
Total	46

Second Semester—January to June.

Pediatrics	10
Orthopedics	2
Anesthetics	2
Eye, Ear, Nose and Throat.....	12
Tuberculosis	4

General Review and Misc.....	18
Record Keeping	2
Total	50
Grand Total	234

PRACTICAL WORK.

First Year

	Months
Preliminary Work	2
Medical Nursing	4
Surgical Nursing	4
Obstetrical Nursing	2

PRACTICAL WORK.

Second Year.

	Months
Administration and Record Keeping.....	1
Operating Room	3
Diet Kitchen	1-2
Obstetrics	2
Children	2
Medical Nursing	2

Dr. Humiston: I would say by way of explanation that the Director of the Department of Registration feels that he has been deprived of any committee with any right to advise him in this work, the work of the committee of five nurses having been wiped out by the opinion of the Attorney General. Let us be thankful!

It is clearly then the duty of some one to make a recommendation, and this is a beginning, and it is clearly the function of the State Medical Society to have something to say about the training of the assistants which the doctors must have in the work of alleviating human suffering, and they are the proper ones to make the recommendation for their training. Hence this committee felt justified in making this recommendation as a beginning.

The Chairman: This report will be adopted if there is no objection.

Dr. Bowe (Jacksonville): This was one of the bones of contention before the last legislature. It was one of the hardest questions we had to meet, and, as Dr. Humiston says, I think we really accomplished a great deal when we disposed of this Board that were advising the State Department of Registration and Education.

As I understand it, this suggestion is not final. Here is the final wedge that we were able to get into them that I think did more to block the proceedings of this group of nurse politicians than anything else. The largest employer of nurses in the State of Illinois is the state itself. These training schools came into existence some

years ago in the State Hospitals and were a powerful factor in alleviating suffering and advancing nursing.

This Department of Education came into being and then it virtually eliminated them, and I believe that aside from the School of Psychiatric Nursing that is now in existence at the Chicago State Hospital, that there is not another training school in existence at this time.

We are trying again, I know, to get them on their feet, and they have rendered valuable service to the people of the State of Illinois, and it is an advance step, it is an economic question with the State, and thereby we were able and will be able to get the cooperation of thinking people in this State.

The curriculum as laid down by the Department of Education and Registration of Illinois is simply an outrage. With all due respect to my brethren on the surgical side of this question, just consider the time that is given to the question of operating room technique and surgical nursing and questions of that kind, obstetrical technique, etc., and the little time that is given to the question of neuro-psychiatry in all its forms. It was elective, as I understand it, in their curriculum. A superintendent of one of the largest hospitals in Chicago admitted that some of their nurses had never had a day of experience in nursing neuro-psychiatric cases, and yet they were the preferred students in examination before this Board.

One attorney said, "Doctor, your place for redress is before the Circuit Court of Sangamon County; this thing is discriminatory, it is an outrage against the people when a few large hospitals can dictate a policy of that kind that eliminated one of the most potent and successful institutions in this State in caring for the State's charges, simply to the advantage of a few large hospitals that were profiting materially in the larger cities and the tax-payers suffering thereby."

And so, before this report is finally accepted and this is laid down as a curriculum, I would like for some of the friends of the medical side, and especially those in neuro-psychiatry and those who are interested in the re-establishment of training schools in the State, that we have a chance to consult with you in this matter.

One member of the legislature, a man very

prominent in Chicago and who is now in a certain lawsuit that is going on there, said to me that the attendants were a bunch of bums who beat up the patients and things of that kind. I want to tell you that the sacrifice that was made by some of the graduates from the Illinois State Hospital Training Schools in this State and the service rendered was not surpassed by any who went on the field of action. The men who had a chance to observe it will bear me out in it. We should take up this question not only to help the general hospitals but also the State hospitals.

Right there is where we have this trouble in the question of preliminary education. I contend that a girl who works at home in the country and helps her mother in general housework and develops an intellect that is material and constructive and who is able to help take care of a family and dress children and attends a country school and meets the common school requirements is the equal of any girl who graduates from the Jacksonville or Evanston High School.

The Chairman: We now come to the new business. As is usually the custom at this time, the Chair will appoint a Committee on Resolutions. That Committee will consist of Drs. Markley, Beirne, Lynch, Way and MacKechnie. Any resolutions coming before this house will be referred to them, and all resolutions coming before the house must be submitted to the Committee on Resolutions before it can be brought before the house. Have you any resolutions to submit?

If there are none, we will next consider some changes in the Constitution and By-Laws which are to be presented at this time. I will ask the Secretary to read them.

The suggested changes were made.

The Chairman: The Chair will entertain a motion that there be a committee appointed on constitutional change, and they can look over these and bring in recommendations on Thursday morning. There is no action to be taken on them at this time.

Dr. Gilmore: I move you that a Committee of five be appointed to act as a committee on the proposed changes in the constitution and by-laws. (Seconded and carried).

The Chairman: The Chair will appoint on that committee Dr. Gilmore as Chairman, Dr.

Freeman, Dr. Sibley, Dr. Harger and Dr. W. Johnson.

Is there any new business to come before this meeting of the House of Delegates?

Dr. Lillie, of East St. Louis, states that he believes it is the duty of the Chairman to make a statement in regard to the reasons for objection to proposal No. 300 by certain members of the profession. It is not easily explainable, from our point of view. However, their point of view is that by putting No. 300 into the new Constitution, that it will nullify the Medical Practice Act. To that, for the sake of argument, we are perfectly willing to agree, but we do not agree for one moment that we would be worse off under that condition than we are now, but if Dr. Drake will kindly come forward, we will be very glad to hear from him, and we will show him the most friendly attitude, we can assure him.

Dr. Drake: I think this rather leaves me in the attitude of being opposed to Proposal 300. As a matter of fact, I heartily concur in the principle enunciated in that proposal. When the proposition first came to my attention, I took it to the Chairman of the Constitutional Convention, Mr. Woodward, who, as many of you will at once recognize, was the gentleman who wrote the Medical Practice Act that is now in operation in the State of Illinois, and which has been lauded from one end of the country to the other as the best Medical Practice Act on the statute books of any state.

Mr. Woodward has a very kindly interest in the medical profession. I knew that the opinion that he would give me would be absolutely sound. Briefly, Mr. Woodward pointed out this with respect to proposition 300—first, that the substance of the proposition was a matter for legislation and not for constitutional enactment. Second, that if the proposition were adopted and written into the constitution, that it would immediately wipe out all medical legislation, including the present Medical Practice Act now on our statute books. Third, if it were enacted, by reason of one simple little word in the proposition, no person engaged in public health work would be permitted to engage in such work unless he met the standard established for the practice of medicine. In other words, nurses, engineers, clerks—everybody engaged in public

health work would have to first acquire the right to practice medicine under any new regulations that may be written. Under such circumstances, it was felt that the proposition at least should be reworded.

The matter was discussed with Dr. Van Der-slice and with Dr. Humiston and others. I think that they finally agreed that the proposition should be reworded in order that it would not do all of the things that Mr. Woodward indicated that it would do. Mr. Woodward, as I understand it, will be before your body tomorrow to discuss "A Constitution in the Making." I presume at that time you might take up with him the question of this proposition, and I can assure you that any advice that he would give you, if he elects to do so, will be thoroughly dependable, because, as I know him, he has the best interests of the medical profession at heart. I want to make it perfectly clear to you gentlemen that I am in hearty sympathy with the principle enunciated, but I think the language of the proposition is unfortunate and entirely too sweeping. Thank you.

The Chairman: There is no motion before the House. This is entirely informal, and unless there is some special reason for it, there is no use to make it more formal. If there are no other remarks to be made, I will ask Dr. Humiston to reply.

Dr. Humiston: I believe the Committee's report makes perfectly clear the attitude of the Committee. We had a purpose rather than a plan, that we wished to deny to quacks, to fad-dists, to Christian Scientists the right to practice medicine and treat the ailing, the sick, in Illinois, and that was the object of this Proposal No. 300, and we asked that committee as a whole, or any member of it, to write it in such a way as to make that clear. That was what we wanted.

Now, this was drawn by an attorney. I am not an expert lawyer, and consequently I simply read what the thing states and am satisfied with it. I think Proposal No. 300 is all right. I do not believe that we could not survive the shock or having those who go out from the public health agencies made doctors before they try to practice medicine in different parts of the state.

I do not believe it would be any great catastrophe in this state if Exemption No. 5 in Sec-

tion 20 of the Medical Practice Act, the best act in the world, which says those who use mental means alone without the aid of any material remedy shall be exempt from the stipulation to this contract and may go out and murder innocent babies and helpless children, and the law does not apply to them. If we are to take the law off the worst offenders that we have, let us take it off the best that we have who are already three years above the law.

The Medical Practice Act defines what it takes to become a doctor. It takes eight years of grammar school, four years in the high school and then four years in college, and then a year in a hospital, making nineteen years on the benches before we dare go out to practice medicine at all. And then it is unprofessional to promise to do the impossible, and if we do, we lose our license.

A Christian Scientist can go out and treat any disease there is under the present law, and it is named in the law. I can tell you how it got there, the shameful bargain by which it was arrived at, and the same men who are opposing this were a party to that agreement. It is about time that the medical men stood up for their rights and demanded that in this country there shall be equal rights to all and special privilege to none.

If there be legislation in this thing, look in the constitution that we have now, and there is plenty of it. Look in what they are preparing day by day and you find legislative work going into it every day. There is legislation in this constitution and in every other one. I have a very good letter from Mr. Woodward in which he sets forth these things, and in all sincerity and in a very respectful way sets forth his views. That was well considered. No one is questioning his motive or his good intentions, but the doctors have been the goat too many times at the hands of the legislature and those who make constitutions, and it is about time that we assert ourselves and get something there which protects the public through their next friends, the medical profession.

Now, it is useless to say that this is a legislative matter which may be corrected by legislative means. The legislature has had fifty years, and see what we have. We have in Chicago just now thirteen hundred medical students taking

this nineteen year course. Just across the river in Iowa are seventeen hundred Chiropractors being primed to come over here as soon as the way is open, and it is pretty nearly open now, and they try to open it at every meeting of the legislature. These seventeen hundred sharks will be added to the ones we have. Let us have something in the constitution that denies the right to the legislators to do anything except the right thing, and I dare say that if we can get this before the people for a vote, that it will be the greatest vote-getting part of the new constitution. There will have to be something in it besides higher taxes if we wish ever to have this thing adopted.

Now, there may be some defect from a technical standpoint. There are seven or eight lawyers in this convention and two or three men with medical degrees. But there isn't a man in that convention who is doing active practice and carrying the grip, and who really represents medical votes there, or has done a single thing in favor of the medical society. If this thing wasn't right, why aren't they there with an amendment, with something which will improve this? No, nothing but a millstone. Let us go down to defeat, if need be, asking for something which we believe we ought to have!

Dr. Bowe (Jacksonville): *Mr. President and Members of the Society:* I wish to heartily endorse what my friend, Dr. Humiston, has said. I heartily agree with Dr. Humiston regarding this practice act that has existed in Illinois for a great many years.

It is a notorious fact—I want to call your attention to the state of affairs that existed down here at St. Elmo. I want to call your attention to the state of affairs that exists right in my own town of Jacksonville, where all the batteries of technicians are dealing with that case of a would-be chiropractor who can treat children for scarlet fever or diphtheria or tuberculosis and is not required to report that case, but the minute I fail to do that, I am fined and amenable to the law.

The primary consideration in this question is the public, the people, and because of the mission that is entrusted to us by the public, it is our duty to take a firm stand in this. We can be no worse off if every letter pertaining to that practice act is wiped from the books of this State. Look

in your own community—anyone can go out, a Christian Scientist can approach a case of diphtheria or any contagious disease, treat it, not report it, and who is the sufferer? The community.

I heartily agree with what Dr. Humiston has said, and I assure you, my friends, those of you who know, those of you who have been in the work, that it is from years of experience. Let us go down to honorable defeat in this matter rather than to compromise.

The Chairman: At the April meeting of the Council of the State Society, the Council went on record that in the opinion of the Council, it was better to go down for defeat asking for 300 as it is now written rather than to accept any compromise. The Chair is willing to entertain such a motion from the House of Delegates.

Dr. Humiston's report states that he is willing to accept any one of three or four compromises which have been submitted.

Dr. Way: Then I make a motion that this body go on record requesting that proposal 300 be adopted without compromise. (Seconded and carried).

Dr. Burkhardt: I move you that this House of Delegates adjourn to meet Thursday morning at 9:00 a. m. at the Christian Union Church. (Seconded and carried).

Adjournment

NOTE:—Proceeding of second day's session will appear in a later issue.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otolological Society was held on Monday evening, November 3, 1919, at eight o'clock.

The President, Dr. Elmer L. Kenyon, in the chair.

DR. C. JOHNSTON DAVIES gave a lantern slide demonstration of War Injuries of the Head.

ABSTRACT

In the examination of the frontals, ethmoids and submaxillary sinuses two plates were made, antero-posterior and lateral. For the antero-posterior view the patient was placed prone on the table, the face resting in an 8 x 10 plate, placed on an inclined plane, for the comfort of the patient. The tube was brought close to the head, centered and tilted so that the central ray passed through the head at an angle of 23° to an imaginary line passing through

the glabella and the external auditory meatus. In this position the shadow of the heavy petrous portion of the temporal bone was placed at the lower third of the orbit and the upper third of the antrum.

For the lateral view the patient was placed on his side, with the affected side of the head next to an 8 x 10 plate resting on a small platform, the head being placed so that the sagittal suture lay in the same plane as the plate. The head was then clamped in position and the tube brought close so the central ray passed through the pupils of both eyes when viewed from before backward, and about 3 cm. posterior to the supraorbital ridge. In this position the depth of the frontal sinus and the thickness of the anterior and posterior walls were readily determined. It was absolutely necessary to know this before the degree of pathology of the sinus could be determined. In this position the anterior and posterior ethmoidal cells showed clearly or not, depending on their being free from disease; also the shadows of the anterior and posterior clinoids and the lateral view of the sphenoid.

In examining both sphenoids the patient was placed in a sitting position, the chin projected forward resting on an 8 x 10 plate placed on an inclined plane of 25°. The tube was brought close, centered and tilted so that the central ray passed through the head about 3 cm. anterior to the external auditory meatus, striking the plate a little short of a right angle. The developed plate showed the sphenoids posterior to the larynx and the degree of their involvement could readily be determined.

Both mastoids were placed on the same plate, for comparison, the occiput being in the center of the plate. The patient lay on his side with the right or left mastoid, as the case might be, next to one-half of an 8 x 10 plate, the opposite half being covered with a piece of sheet lead. The pinna of the ear was folded forward and the head clamped in position. The tube was brought close and tilted 15° toward the face and 15° toward the feet and so centered that the central ray entered the head at a point 8 cm. posterior and 8 cm. above the external auditory meatus of the ear nearest the tube. This position showed well all the cells of the mastoid, including those which might be obscured by the posterior border of the petrous. Stereoscopic plates were made of all mastoids which, compared with the flat plates, gave much additional information.

The slides shown presented in a small way the type of injuries received at the U. S. General Hospital No. 11, Camp May, N. J., and known as the Special Overseas Head Hospital. Cranioplastics were done in those cases where the loss of bone was so great that the operation was indicated for cosmetic or prophylactic reasons. No attempt was made to remove deep intercranial foreign bodies as very few symptoms were produced by them, probably because most of them were lying in the falx cerebelli. Those lying in the motor regions of the cortex and producing symptoms were removed by magnet. Wounds

were invariably sterile, and in but a few cases had bone fragments or small foreign bodies been left.

The slides showing the injuries of the jaw and upper face represented the type of fractures with loss of bone tissue. In a few cases they were able to demonstrate new bone cells, which was of great help in determining future treatment. In the cases where non-union existed after three months' treatment, bone grafts were used. Their experience agreed with that of the British, that it was a waste of time to expect union after this time. Teeth seen in the area of defect were invariably extracted.

Chronic sinusitis was in a majority of cases due to retained small foreign bodies. An interesting case was one in which a small fragment of high explosive shell penetrated the right cheek and was found lying in the sphenoid at the midline. The only symptom was a slight restriction of both fields, which gradually cleared. All foreign bodies of the mastoids and sinuses, with but few exceptions, whether producing symptoms or not, were removed.

DISCUSSION

Dr. Joseph Beck thought this splendid presentation would be of value to many men, particularly those who were still in doubt regarding the value of the X-ray in the diagnosis of sinus and mastoid disease. He had followed the method as first brought out by Killian, and had never found it wanting, in having the patient placed on his stomach or sitting up, with the head at an angle of 25 degrees from the flat table, when the picture was taken with the target above the occiput the result would correspond so exactly in size that he could take a model from the roentgenogram and find that it would not vary in the slightest. For single pictures Dr. Beck thought this position was the best.

In the stereoscopic photographs it did not matter whether the head was flat on the table or not, because when the pictures were placed together they gave the position in which the head was taken.

Dr. Beck was glad that Dr. Davis spoke of the pathology being shown by the Roentgenogram; he had spoken several years ago of making a diagnosis of the various kinds of mastoid pathology, especially in the acute forms of ear diseases, but it was also possible to make it in the chronic conditions. He had been using, for more than three years, the Roentgen-ray in the diagnosis of otosclerosis. Whether this would be of value or not was still to be proven when the cases could be diagnosed post-mortem, but clinically he could show early cases of otosclerosis, rapidly progressing cases with the retrograding change of the bony capsule of the labyrinth in the vicinity of the fenestra ovalis.

Dr. Alfred Lewy asked Dr. Davis to repeat in detail his technic in mastoid diagnosis.

Dr. Davis stated that the position he described for sinus examination had suited his purpose very well, but nearly every man who attempted radiology of the head employed his own particular technic. In diagnosing sinus plates the entire plate must be considered. A shadow per se meant nothing; it might be a normal shadow for that sinus. With a shallow sinus, or a sinus with a very thick wall, there would be a more or less dense shadow which would simulate that of a very deep frontal sinus with granulation tissue or dense pus, so it was necessary to study the density of the plates before attempting the shadows.

In the diagnosis of the different forms of mastoid pathology they had found that they could give the

surgeon a great deal of information, especially after making the stereo-plates, which he was unable to obtain in any other way. In the stereo-plates they had been able to look into the cells very clearly and could distinguish between granulation tissue and pus in a few cases, but not between thin pus and fine granulation tissue. They had evolved a technic whereby both mastoids could be placed on the same plate and studied stereoscopically, for comparison. After the head was placed on the plate, the tube was centered so that the central ray would pass through the mastoid at an angle of 15 degrees toward the feet and 15 degrees toward the face.

Dr. Robert Sonnenschein read a paper entitled "Dermoids of the Anterior Mediastinum, with Report of a Case."

ABSTRACT

He stated that while dermoid cysts had been found in most parts of the body, especially the ovaries, they were very rare in the anterior mediastinum. The case he reported was that of a woman 30 years of age who had for some years suffered greatly from dyspnea, especially on exertion, and was often prevented from sleeping because of distress in breathing. At the time of the examination, in April, 1915, he found a septal deviation, but the pharynx and larynx were negative. The neck showed a small, soft goitre and behind the sternal notch could be palpated the upper end of a round mass. On percussion there was dullness over the upper portion of the sternum, and on X-ray examination a shadow was found in this area. The diagnosis of a thymus was made, but an operation performed by Dr. Pond some months later showed that the mass was a cyst containing hairs and some sebaceous material. The technic employed was an incision just above the clavicle, the same as in the removal of a goitre. The growth was about the size of an English walnut and had a thick, firm wall. Histologic examination of the latter showed that most of the structures found in the skin were present. This, with the presence of the hairs, made the diagnosis of dermoid cyst.

Dr. Sonnenschein showed that in the literature cysts of the anterior mediastinum have been reported from time to time, but Christian, in 1902, in reviewing the literature showed that 39 cases had been reported and that his was the fortieth. They are thus very rare growths in this region.

Regarding the etiology, Ribbert was quoted as having shown, years ago, that inclusion of epidermis in various structures of the body may produce cysts lined with epidermis. These dermoids which are found in the mediastinum develop in the neck and then are carried down into the thorax during fetal life, just as the heart descends into the thorax.

Symptoms are sometimes absent clinically, but when present usually produce dyspnea from pressure on the trachea or bronchus, with at times expectoration and foul secretion, or even hemoptysis. Pathognomonic is the coughing up of hairs, which may occur at various times during the disease. The physical signs are usually slight, but occasionally there is bulging of the chest on the side of the tumor. In the cases

occurring in the anterior mediastinum there is dullness over the sternum. The disease is usually of long duration, and is often detected only at post-mortem. If pressure on the lungs or pericardium ensues serious symptoms arise, and attention is at once drawn to the growth. The size of the dermoids varies from a pigeon's egg to that of a child's head.

Pathologically, dermoids are divided into three classes: first, the essential dermoids of ectodermal origin, usually unilocular or, at times, multilocular; the walls are lined with epidermis, usually containing hair follicles and sebaceous glands. Second, those cysts of great complexity, derived from all three germinal layers, with the formation of rudimentary organs; these may be regarded as teratomata. Third, we have tumors of the first two groups which are malignant in some part of their structure and form metastases in other organs. The contents of these cysts in most of the cases are thick, greasy, semisolid materials mixed with hair.

Regarding treatment, the author stated that while operative interference offers the only solution, a radical operation is often exceedingly difficult, while simple drainage usually proves ineffectual. He stated that he did not know whether radium or X-rays had been used in these cases, but he doubted whether they would be of any help.

DISCUSSION

Dr. A. A. Goldsmith stated that he saw this patient and believed that if he had a similar case today he could come to better conclusions than he could at that time, because of the improved technic for examination. He thought this patient was suffering from a thymus, because that was the ordinary thing to consider. There was a palpable mass beneath the sternum.

In differentiating between malignant tumors and benign the marked dyspnea and symptoms of pressure upon the veins should be considered. The chronic cases very frequently showed enlarged veins upon the abdomen, but these were less common in the acute forms.

Dr. J. Holinger thought it was very peculiar to have a new-formation of ectodermal nature between the mesodermal and endodermal structures. Embryologically two features seemed very extraordinary in this tumor; first, the location in the thorax showed that cell-material must have been thrown in an abnormal position at a very early state of development, and, second, the tumor was not quite in the middle line.

Major W. F. von Zelinski stated that he had seen an operation in Prof. Sibleau's clinic in Paris for a growth of this kind located in the sublingual space and projecting into the mouth. Sibleau, who made the diagnosis, said that in all probability it was a dermoid cyst. The patient was a girl aged ten or twelve years and the tumor was the size of a small orange, which was found to be filled with a sebaceous mass. Prof. Sibleau stated that he had seen a number of similar cases and thought they were not uncommon.

Dr. Sonnenschein (closing) stated that he was not an expert on the subject of embryology, but had stated in his paper that it was the inclusion of ectodermal cells which produced dermoids. Where these developed in the cervical region of the fetus they might descend into the chest and lodge anywhere in the thorax, even though it was true that

the other organs in the chest were mesodermal. These dermoid growths might occur in any region of the body, but according to observations were found most frequently in the ovary.

Dr. T. W. Lewis read a paper on "The Lingual Duct in the Production of Paroxysmal Cough."

ABSTRACT

The essayist recalled the course of development of the tongue and thyroid gland and pointed out that the lingual duct might remain patent in some part of its course even until adult life. It may run upward as a patent canal from the isthmus of the thyroid, pointing in the midline of the neck, or on the side, or the extremity may be closed, giving rise to the formation of a cyst. It may have a patent lumen without connection with either the thyroid or the surface, and there may be the frequently observed duct running down from the foramen cecum. The latter condition was the one dealt with in the paper: a duct beginning at the foramen cecum and running downward into the base of the tongue for a varying distance.

Three cases were reported in which there was cough of paroxysmal type, occurring in attacks lasting several hours at a time over a period of several weeks or months. In one case there was an extremely foul and nauseating taste. In each case careful cleansing of the duct with pure carbolic acid afforded prompt relief. In one case there had been no return of cough at the time of the report, and in another case the same treatment promptly relieved a recurrence of the cough after an interval of several months.

These were the only cases the author had seen presenting infection of the lingual duct, but in the last ten years he had encountered six other patients into whose lingual ducts a probe might be passed for half an inch, but they showed no evidence of disturbance. He cited a case seen by a colleague who had slit this duct with the electro-cautery to the entire and permanent relief of the patient, who for eighteen years had been troubled with paroxysmal attacks of coughing.

In searching for an explanation of the relation of the focus of irritation in the lingual duct and an explosive paroxysmal cough, the glosso-pharyngeal-pneumogastric reflex seemed unsatisfactory. The filaments of the superior laryngeal nerve which are distributed at the base of the tongue are held responsible for the cough in infection of the lingual tonsil. These filaments were thought by the essayist to be the nerves involved in irritation of the lingual duct, and to give a direct connection with the pneumogastric and the cough center.

The conclusion seemed justified that the lingual duct may be the nidus of an infection producing a paroxysm of coughing not yielding to ordinary methods of treatment.

DISCUSSION

Dr. Robert Sonnenschein was glad to hear Dr. Lewis call attention to the cause of such an annoying thing as an intractable cough. He had never looked at the thyro-glossal duct in this connection, and thought Dr. Lewis had been of much service in

calling attention to it. He was sure the lingual tonsil was responsible for many coughs, and many cases had yielded to cauterization with the galvano-cautery.

Dr. Lewis (closing) said he felt rather chagrined when he encountered the first case not to know that there was such a thing as a lingual duct. When he found pus exuding from the base of the tongue and could not account for it, he was somewhat puzzled and he had found it difficult to get any light on the subject, either from fellow-practioners or the literature. He hoped that his brief paper might provoke investigation.

Dr. Joseph Beck presented two brains showing "Tumor and Abscess." The first patient was a woman aged 29, who was referred for sinus operation. She had been rapidly losing her vision with nothing to account for this except a very large blind spot which was supposed to be of retrobulbar origin. She had been operated on for goitre and had recovered except for marked exophthalmos. Vision was reduced to 1-200 in both eyes. No evidence of sinus involvement was found except slight crowding of the ethmoid. A bilateral ethmoid operation was performed but nothing particularly abnormal was found. Following this vision for large objects improved but there was not much change for acuity of vision at a distance. The patient gave a history of some noise in the right ear several years previously, but functional test was not made. There was no mention of headache and a slight unsteadiness of gait was the only sign of brain disturbance. The patient returned in six weeks with a typical choked disc of nearly 7 D. and symptoms of brain tumor. Functional tests for the brain stem and vestibular apparatus revealed an absolutely dead ear; otherwise, normal in every way. A neurologist diagnosed a retrolabyrinthine tumor. The cerebellar region was exposed bilaterally, slightly more to the right. The patient was turned with the face down so the anesthetic could be administered from below, and when turning her on to the abdomen the breathing became shallow; she was immediately placed again on her back and recovered normal respiration. After she recovered she was again placed face down and a large flap was removed from the region they wished to explore. There was considerable hemorrhage and when the bony flap was removed the patient stopped breathing again and attempts at resuscitation were of no avail. Immediate post-mortem was performed and in the region of the cerebellum was an apparently free tumor, with a well defined capsule, located in the region of the pons and medulla, near the vital center. The patient had never mentioned the fact that she could not lie on one side without disturbance, but the husband stated that she had told him that such was the case.

The second specimen was the brain of a married woman, aged 28 years, the mother of two healthy children, who gave a history of having had a suppurating ear for a number of years during childhood. Three years previous to examination she had an acute suppuration of the ear from which she never

recovered. In June, 1919, she developed pain in the head and a great deal of dizziness and vertigo. The physician who referred her to Dr. Beck agreed that she had a localized labyrinthitis in connection with a chronic suppurating ear, but as the symptoms were so acute operation was postponed. After a delay of two weeks the referring physician thought the patient had a cerebellar abscess and operation was decided upon. The abscess was very readily located on the under surface of the cerebellum in the region of the sinus. It was opened and drained and very foul pus escaped; bacteriological examination showed a fusiform bacillus. A drain was inserted, which was removed after ten days; there was no further discharge, but at the place of drainage a small projection appeared and rapidly increased until it was as large as a small apple, and violent headache developed. An attempt was made to replace the hernia, but this produced grave symptoms and it was decided to amputate it. This gave the patient considerable relief, but a sort of sac was formed and following this a fistula appeared, which was thought to be cerebrospinal, and the patient grew gradually worse, and died on November 2, 1919. Post-mortem revealed an apparently normal brain with slight edema at the pons and a collapsed abscess, with a thinner wall than a chronic abscess usually shows. When the temporal bone was removed they discovered on the posterior surface a fistula from the posterior semicircular canal. Stereoscopic radiogram of this bone showed that the labyrinth was involved in a destructive labyrinthitis.

Histological examination, details of the tests and all other examinations to be reported fully at a later date.

DISCUSSION

Dr. C. M. Robertson thought the cases should be reported in full and asked whether when the hernia was removed in the second case a part of the cerebellum was also taken away, and whether any peculiar symptoms followed the amputation, anything in the way of spasms.

Dr. Robert Sonnenschein asked whether an X-ray had been taken in the first case to determine the condition of the auditory meatus. Also, in regard to the second case, was it not true that except for a few centers, most of the cerebellum could not be removed with safety?

Dr. J. Holinger gave a short description of a patient seen at the Cook County Hospital, who gave the impression of suffering from a meningitis due to an old suppurating ear. The patient was operated twice and died about ten days after the first operation. Post-mortem revealed an enormous brain tumor which forced the hemispheres, the pons, the cerebellum and the medulla so out of place that the normal anatomy could hardly be reconstructed. Following the first operation the child rallied somewhat and recognized her mother, but soon became worse.

Dr. Michael Goldenburg cited a case that was under his observation six or eight months ago, when it was brought to the infirmary for removal of tonsils and adenoids. There was nothing unusual about the operation, but a few days later the mother brought the child back, stating that he had been blind since the operation. Fundus examination revealed a double

papilloedema and brain tumor was diagnosed. Subtemporal decompression was performed, but the tumor was deep-seated and nothing could be accomplished.

Dr. Beck (closing) said that no information was obtained at the point of the auditory canal in the first case. In the second case quite a portion of the cerebellum was removed, but there were apparently no symptoms. Had the patient been able to walk she might have exhibited symptoms, but she was bedfast and showed nothing that could be referred to the operation.

FULTON COUNTY

The 90th meeting of the Fulton County Medical Society met in the auditorium of the Y. M. C. A. building, Canton, Ill., May 25, 1920, and was called to order at 2 p. m. by President Coleman.

The minutes of the December meeting were read and adopted. Dr. E. F. Brewer of Farmington was elected to membership and Dr. J. E. Sutton was elected to honorary membership for life.

Necrologist Stoops reported upon the death of Dr. T. R. Plumer of Farmington, which occurred Feb. 28, 1920.

Dr. Oren reported some changes in the by-laws of the State Society adopted at the Rockford meeting.

Dr. LeMasters of Macomb presented a valuable paper on "Radium."

Dr. P. S. Scholes of Canton gave an interesting paper on the "Eye, Nose and Throat in Relation to General Diagnosis."

Dr. C. J. Johnson of Canton presented an interesting paper on "Empyema."

All of these papers were freely discussed and much valuable information brought forth.

Twenty members were present.

MACOUPIN COUNTY

The Macoupin County Medical Society met in regular session at the Court House in Carlinville, Ill., Tuesday, May 25, 1920.

At the business meeting the following officers were installed: President, L. D. Rockefeller, Bunker Hill; vice-president, D. A. Morgan, Nilwood; secretary-treasurer, T. D. Doan, Scottville; censors, W. B. Dalton, Scottville; C. D. King, Gillespie, and T. W. Morgan, Virgen; program committee, L. D. Rockefeller, Bunker Hill; T. D. Doan, Scottville, and M. Herschleder, Mt. Olive.

Dr. T. D. Doan, of Scottville, delegate, gave an interesting report of the meeting of the State Medical Society at Rockford.

Drs. L. P. Botsford and E. R. Chamness of Carlinville, upon recommendation of the censors, were elected to membership in the society.

Dr. C. Frederick Pfingsten of St. Louis gave an interesting address on "The Modern Tonsil Adenoid Operation."

A splendid dinner was enjoyed by all of those present.

The meeting was a success from every standpoint and a vote of thanks was extended to Dr. Pfingsten and all others who helped to make the meeting a success.

The society adjourned to meet at Gillespie in July.

MADISON COUNTY

Our May Meeting

The Madison County Medical Society met in the Court House at Edwardsville on May 14, 1920. In the absence of the president and vice-president, Dr. J. B. Hastings presided.

Thirty members and visitors were present.

On motion the treasurer was instructed to set aside \$1,800 out of the tuberculosis fund to pay the salary of the community nurse for the ensuing year. On motion of Dr. Hastings it was ordered that we hold our next meeting at Beverly Farms, Godfrey, on June 11, 1920. Dr. W. H. C. Smith extended a cordial invitation to the ladies to join us at this meeting. He also asked that the members of the Greene, Jersey and Macoupin County Medical Societies be invited to attend.

Dr. M. F. Arbuckle, of East St. Louis, then gave a very interesting and instructive talk upon "Face Surgery" and on motion a vote of thanks was extended. President F. O. Johnson came in and took the chair. The report of the Community Nurse was read and ordered filed.

A very lively discussion on Proposal No. 300 followed and upon its conclusion it was ordered that our state delegate, Dr. W. H. C. Smith, representing us in the House of Delegates, should vote on this matter uninstructed.

ST. CLAIR COUNTY

Our June Meeting

The St. Clair County Medical Society met in regular session at the St. Clair Country Culb on June 3, 1920, as guest of the Belleville branch, with President B. H. Portuondo presiding. Sixty members present.

Minutes of the May meeting as appearing in the *Bulletin* were approved.

Dr. Heber Robarts delivered a brief discourse on "Radium."

Dr. W. T. Coughlin presented a highly interesting and instructive series of case reports, accompanied by lantern slides, on "Carcinoma of the Breast."

The following resolution was presented and adopted:

WHEREAS, A serious illness deprives this society of the genial fellowship of an esteemed member and ex-president, therefore,

Resolved, That the St. Clair County Medical Society extends to Dr. J. L. Wiggins the sympathy justly due one whose counsels are sadly missed and whose presence added greatly to the interest in our meetings.

Resolved, That his early return to his usual activi-

ties, even "golf," is the earnest hope of his colleagues.

It was moved and seconded that the society extend to Dr. Coughlin a rising vote of thanks. Carried.

No further business appearing, the society adjourned.

WALTER WILHELMJ,
Secretary.

THE MEDICAL RAVEN

Once upon a midnight dreary,
The doctor slumbered weak and weary,
And all the town could
Hear him snore.

While he lay there sweetly napping,
Suddenly there came a tapping
Like a ramgoat madly rapping
His hard head
Upon the door.

"Get thee up," a voice said loudly,
"Come in haste," it added proudly
Like a man who owned a million—
Or much more.

But the doctor never heeded;
Back to dreamland fast he speeded,
For such men as that he needed
In his practice—
Nevermore.

For long months that man had owed him,
Not a cent he ever paid him,
And the doctor now will dose him—
Nevermore!

Atlanta Med. Surg. Journal.

Personals

Dr. Edgar G. Merwin of Highland received a fracture of his leg in an auto collision.

Dr. A. F. Benson of Galva sailed for Sweden, June 12, and will visit European clinics this summer.

Dr. J. M. Furstman, formerly of Chicago and later of La Crosse, is making his mark as health commissioner of Bloomington.

Dr. Downs, Bloomington, was assaulted in his office, May 22, by two men to whom he had refused to issue a prescription for liquor.

The paragraphers just have to notice the Donovan family with its eight doctors, including two members of the Illinois State Medical Society. The name of one is "Postum," which denotes some kind of cereal, or is it serial?

Dr. Milton Jacobs of the staff of the Elgin State Hospital and who has also had charge of the examination of subnormal children of Elgin schools, has resigned and will enter general practice in Elgin.

Dr. George V. I. Brown of Milwaukee has been appointed president of the Tri-State Society to fill the vacancy caused by the death of Dr. Walter B. Helm of Rockford and Dr. Joseph S. Evans, professor of medicine, State University of Wisconsin, Madison, has been chosen vice-president in place of Dr. Brown.

News Notes

—Dr. John S. Nagel was elected president-elect, and Dr. Hugh N. MacKeehn, secretary of the Chicago Medical Society at the annual election, June 16.

—At the annual meeting of the Chicago Surgical Society, June 4, Dr. William Fuller was elected president; Dr. Vernon David, vice-president; Dr. Frederick G. Dyas, secretary, and Dr. Charles F. Sawyer, treasurer.

—At the commencement exercises of the College of Medicine of the University of Illinois, June 16, a class of forty was given the degree of Doctor of Medicine. Dr. David Kinley, president of the university, conferred the degrees and delivered an address on "Some Questions in Medical Education."

—Reconstruction of Edward Sanatorium, Naperville, which was destroyed by fire in February, is to be started at once. Although the entire amount necessary for the rebuilding of the institution has not been obtained, a sufficient sum has been realized to permit the reconstruction work to be entered on at once.

—A site for the erection of the new schools of medicine, dentistry, commerce and law of Northwestern University, Chicago, was assured, June 15, when the board of trustees voted unanimously to buy the Fairbanks-Farwell tract at Chicago avenue and Lake Shore drive. The purchase price is more than \$1,000,000.

—At the annual meeting of the Northwestern University Alumni Association held in Chicago, June 14, the following officers were elected: President, Dr. Franklin H. Martin, '80; vice-presidents, Drs. John F. Williams, '65, and Robert

Blessing, '20; secretary-treasurer, Dr. James G. Carr, '02, and necrologist, Dr. Samuel C. Stanton, '92 (re-elected).

—The Chicago Community Trust is asked to undertake a city plan of health to include all phases of public health and provision for the care of the sick and physically disabled by resolutions adopted at the meeting of physicians and health workers at the Chicago Club, May 28. Among those who spoke on this occasion were Drs. James B. Herrick, Edwin W. Ryerson, Harry E. Mock, E. O. Jordan, Joseph B. DeLee and John Ritter.

—At the meeting of the council of the Chicago Medical Society, June 8, a resolution was adopted providing that a proper inscription setting forth the facts of Dr. Samuel Guthrie's discovery of chloroform be placed on the glacial boulder at the entrance of Washington Park, at Garfield boulevard, known as the Guthrie Stone. This resolution was referred to the committee appointed last year regarding the Guthrie memorial.

—At the annual meeting of the Physicians Club of Chicago, June 17, Drs. Frank Morton, Edward H. Oschner, Truman W. Brophy, Joseph A. Capps, Coleman G. Buford and Ralph W. Webster were elected directors. Prof. Frederick Starr discussed "Mexico of Today"; and at the meeting of the board of directors which followed, Dr. Truman W. Brophy was elected president and Dr. Victor D. Lespinasse was re-elected secretary.

—The annual meeting of the Alumni Association of the College of Medicine of the University of Illinois was held in Chicago, June 5, and the following officers were elected: President, Dr. Karl Meyer, '08; president-elect, Dr. Louis J. Hammers, '02; vice-presidents, Drs. William H. Bradley, '10, Charles H. Hallberg, '11, and William B. West, '06; secretary and treasurer, Dr. John M. Krasa, '13 (re-elected), and necrologist, Dr. O. McWilliams, '99.

Marriages

MORRIS L. WEINSTEIN to Miss Marion H. Liebschutz, both of Chicago, June 1.

EUGENE ALEXANDER MOULTON to Miss Margery Lagerquist, both of Chicago, recently.

LYOYD JAMES BLAKEMAN, Chicago, to Miss Louise M. Pabst of Blue Island, Ill., recently.

VICTORIA CALLA A. BERGSTROM, Chicago to Mr. James Francis Hill of New York City, March 8.

Deaths

WILLIAM BACKUS COOK, Chicago; Bennett Medical College, Chicago, 1882; aged 69; died May 19 from cirrhosis of the liver.

ROBERT GRAVES, Chicago; Northwestern University Medical School, 1893; aged 50; died in Wesley Hospital, Chicago, April 5, from pneumonia.

EMMA B. STANDLEY, Alexis, Ill.; Northwestern University Woman's Medical School, 1887; aged 61; died in Kansas City, Mo., March 21 from myocarditis.

NATHANIEL F. LINDSAY, Robinson, Ill.; University of Louisville, Ky., 1878; aged 70; a member of the Illinois State Medical Society; died March 26 from carcinoma of the pancreas.

ROBERT LEE LOFTIN, Olney, Ill.; Indiana University, Indianapolis and Bloomington, 1919; aged 32; an intern in the Olney (Ill.) Sanitarium; died in that institution April 23 from meningitis.

KESSEY SHINDLE MARLIN, Dakota, Ill.; Pennsylvania Medical College, Philadelphia, 1854; aged 89; surgeon of U. S. Volunteers during the Civil War; died March 2 from senile debility.

JAMES DEWITT CLINTON HOIT, Elmwood, Ill.; Missouri Medical College, St. Louis, 1885; aged 77; a member of the Illinois State Medical Society; for many years a practitioner of Chicago; died May 24.

JOHN HARRELL MAXWELL, Newton, Ill.; Medical College of Ohio, Cincinnati, 1878; aged 85; hospital steward of the Thirty-eighth Illinois Volunteer Infantry during the Civil War; one of the founders of the Jasper County Medical Society; died April 3 from cerebral hemorrhage.

EMIL ANDERSON LYNWOOD, Chicago; Dearborn Medical College, Chicago, 1907; aged 44; captain, M. C., U. S. Army, with service overseas and discharged June 30, 1919; a patient in the United States Public Health Service Hospital, Forty-seventh street and Drexel boulevard, Chicago; died in that institution May 26 from diabetes.

STANTON ABELES FRIEDBERG, Chicago; Rush Medical College, 1897; aged 44; died in the Presbyterian Hospital, May 27, following an operation for mastoiditis. He was assistant professor of laryngology and otology in his alma mater, and attending laryngologist to the Presbyterian and Durand hospitals; a member of the American Laryngological, Rhinological and Otological Society, and secretary-treasurer of the Chicago Society of Medical History. During the war he served eighteen months at home and in France as major, M. C., U. S. Army, receiving his discharge April 29, 1919. He was well known for his work in bronchoscopy and for research on bacteria carriers.

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Original Articles

COMPULSORY HEALTH INSURANCE, A MODERN FALLACY.*

EDWARD H. OCHSNER, B.S., M.D., F.A.C.S.

CHICAGO

On or about February first when the price of fresh eggs and chicken feed was at its height, I wrote my farmer asking him why he was not sending us any eggs. A few days later I received the following laconic answer, "The pullets look good but lay no eggs. Superficially examined, Compulsory Health Insurance looks good, but unlike my pullets it has laid eggs, which, when carefully examined are all found to be addled.

HISTORICAL DATA.

In attempting to write a short paper on Compulsory Health Insurance one is confronted with so many serious objections that one scarcely knows where to begin, hence, I will, in this paper confine myself very largely to objections which I have myself encountered and leave theorizing, the long suit of the proponents of Compulsory Health Insurance, to those who possess a more vivid imagination. However, in order to get the right perspective it will be necessary to refer to just a few historical facts. Along in the late 70's, German Socialists discussed the matter at some length and in order to appease the clamor of the proletariat and because he saw that it would strengthen monarchical government, the far-seeing Bismarck adopted their suggestions and in 1883 Compulsory Health Insurance was legally established in Germany. Bismarck was a thorough believer in a monarchical form of government and eagerly grasped at any scheme which he believed would strengthen the monarchy. Anyone interested in Bismarck's philosophy of government will find a splendid exposition of it in volume II of Carl Schurz's memoirs. That Bismarck was correct in his prognosis as to the effect of Compulsory Health Insurance upon the German mind few thoroughly familiar with recent events will doubt. It is a very great question whether German autocracy and German militarism would have lasted as long as it did had it not been for Compulsory Health Insurance, old age pensions, and the rest of the hybrid ilk, the offspring of autocracy and socialism, nor whether the German military party would have been able to start the conflagration that has devastated

the whole earth had not the German proletariat been tied hand and foot to the government by these schemes. It is indeed fortunate that the German bubble has been pricked and the old German regime destroyed, otherwise German propaganda aided by a few misguided, deluded American theorists might have succeeded in foisting this nefarious scheme upon the American people.

A wise farmer never swaps a good horse nor does the wise legislator meddle with those departments of human endeavor which are relatively well managed under present conditions. I believe American citizens as a whole have better and more efficient medical care than the citizens of any other country. This opinion is based upon a rather large personal experience with medical men and their ways of handling patients both in this country and Europe and upon the fact that the average loss of time from sickness by the American laboring man is considerably less than a similar loss in most other countries and particularly in those countries like Germany and Austria where Compulsory Health Insurance has been in force the longest, and finally, because our mortality statistics show up very favorably when compared with these same countries. From our government statistics¹ and from the mortuary statistics of the New York Life Insurance Company² we have a right to conclude that the average life expectancy in the registration area of the United States is to-day approximately fifty years, at least as good if not better than in those countries which have Compulsory Health Insurance. This splendid showing is largely due to the fact that the individualism of American medical men has not been unduly hampered nor has their enthusiasm been crushed out by an excessive number of governmental restrictions.

The fact that the American medical men have not been unduly hampered in their work not only has much to do with the general excellence of their medical services, but accounts in large measure for the fact that so much of the world's progress in medicine is due to them. It is doubtful whether the medical men of any other nation have contributed so much to the advancement of medicine and surgery during the past twenty years as have our American confres.

In support of the last statement I need but call your attention to the fact that it was a Kentucky

1. Gore, John K.: Paper read before International Congress of Actuaries.

2. Rogers, Oscar H.: Chief Medical Director of the New York Life Insurance Co., personal communication from,

*Read before the Michigan State Medical Society May 27, 1920.

country doctor, Ephraim McDowell, who performed the first laparotomy for an abdominal tumor. Practically all of the early work on appendicitis was done by American surgeons. Most of the recent work in gall-bladder surgery and stomach surgery was done by American surgeons and much of the improvement in the treatment of both pulmonary and surgical tuberculosis is the work of our American confreres, certainly a record to be proud of, and one which should make us very slow in substituting a system which so far has proven an utter failure for the system which has been productive of such excellent results.

INFLUENCE ON HEALTH.

The claim that Compulsory Health Insurance would encourage personal hygiene and right living, is completely refuted by the experience in those countries where it has been tried and also by the experience of every practitioner of medicine with a large practice. To the contrary, it always has had and always will have a strong tendency to increase immorality and disregard for the ordinary laws of personal hygiene, because when the average man is assured free medical service and two-thirds pay for loss of time he is much more likely to throw to the winds all precautions in this regard. What is almost equally bad, it will compel the honest, clean living man to actually pay for the wrong doings of the immoral and dissolute individual. Let us take a concrete case. Six boys graduate from high school together, four are hard-working, frugal, clean fellows with serious purpose in life, one of the four, in fact, is trying to earn enough money to go through college. The fifth, is one of the lazy, shiftless kind who would rather loaf than work, who never loses a chance to lay-off a day or a week, particularly if he can be assured two-thirds pay. The sixth is an inveterate smoker of cigarettes, spends his evenings in ill-ventilated, smoke-laden pool rooms, shortly buys himself a specific urethritis and later acquires syphilis. The fifth one will be at least twice the burden upon the insurance fund as is any one of the first four. The sixth one will be at least four times the burden on this fund as is any one of the first four. What right has any just government to take the earnings of the first four against their will and give them to the last two? A just government protects the weak from oppression and exploitation by the strong and unscrupulous, but the wise government does not penalize the strong, industrious, clean-living and thrifty and favor the weakling, the lazy, the shiftless and immoral, and yet, this is just exactly what a system of Compulsory Health Insurance will do, and just as soon as the government by legislative enactment will favor the latter at the expense of the former, race degeneration must begin and continue until such baneful legislation is again wiped from the statute books. This is not theory. Some of the recently passed welfare laws are already favoring the weakling at the expense of the strong. It is an actual fact that because of some of these laws the weakling is actually being

favoured and because of corruption in government, the crook in many of our large cities has an actual tactical advantage over the honest man. A most interesting volume could and should be written on this subject. The facts brought out would be a surprise and a revelation.

Our colleague, Dr. Chapman, will present statistics and arguments, which, I believe, will prove conclusively the excessive cost of such a scheme, and I will try to prove to you that none of the departments of our government, neither State nor National, has demonstrated its fitness for handling such enormous sums of money wisely, economically or justly. I think it is putting it mildly to say that in this country we suffer from a notoriously inefficient, more or less corrupt administration of government. Pull, favoritism, spoils and partisan politics, nepotism and petty graft are the rule rather than the exception. I have been a citizen of the City of Chicago for twenty-nine years, have watched city and county government rather closely and the above description is, I believe, a fair statement of what has been actually going on during that time. During the past year, the city has paid out in special fees to one third class lawyer, who probably never before had had an income from private practice to exceed \$5,000 per annum, the enormous sum of \$47,500 of the taxpayer's money. In addition, it has paid a dozen or more other attorneys over \$99,000 special attorney's fees. During this year of mal-administration it has, in addition, constantly had upwards of two thousand ninety-day employees on the City payroll, from a total of about 18,000, or over ten per cent. Anyone familiar with industry knows that the employee who stays only ninety days on the job is almost worthless because it takes him about that long to become familiar with his duties and to become adjusted to his work. The reasons why the administration has employed these special attorneys and ninety-day employees are, as near as I can understand, exactly two. First, the special attorneys and ninety-day employees needed the money and second, the administration needed their political support. Anyone with a particle of sense will see that that kind of government is inefficient.

The county administration has been no better during the years with which I have been familiar with it. Twenty-five years ago, I was resident physician at the county hospital. The service of the paid county employees was abominable, much of their time was spent in building political fences for their superiors. I have been connected with one or more semi-private hospitals ever since that time and nowhere have I seen such miserable service. The food was wretchedly bad. In my younger days I had been a hired man on several farms, a lumberjack in the pineries of Northern Wisconsin and a country school teacher, but never have I had to live on the unpalatable, badly cooked, poor quality of food that I was compelled to consume the nineteen months I was a resident physician. The reason was this, that the political overlord of the county had to get rich out of the

food contracts and his satellites had to have a little of the swag. The man who was at that time the boss of the county had not done an honest day's work in ten years and yet he was able to live in a \$20,000 house, have a number of servants and a private carriage, and the money unquestionably came indirectly out of the county treasury and out of the mouths of the poor, dependent county patients. The usual game is this: Bids for first class supplies are advertised according to the provisions of the law. The favorites of the politician in power always put in the lowest bids and get the contracts. They then supply fourth class material and charge first class prices or cheat on the weight, and they and the political overlord divide the spoils. The practice is so common and so hard to detect and punish that the official who will not stoop to it is considered a boob and made fun of. Another favorite way of wasting the taxpayer's money is to appoint friends with good salaries for jobless jobs. Several years ago, the seven drainage trustees appointed for themselves seven secretaries at annual salaries of \$3,500 each, and so far as anyone was able to ascertain not a one of them ever did a real day's work for the county. The story is told that one day an honest man was appointed for one of these jobless jobs in the building department and when he came down and reported for work the chief looked at him in surprise and told him with a twinkle in his eye to walk up and down a certain street and see to it that the buildings did not step out of their accustomed places and obstruct the thoroughfare.

During the four years from 1912 to 1916 I was President of the Illinois State Charities Commission. We had under our supervision, but not under our direct administrative control, sixteen State Institutions with approximately twenty thousand inmates and four thousand employes and we had an excellent opportunity to study the advantages and disadvantages of government control of such institutions. I personally visited every institution one or more times, inspected practically every one of the hundreds of buildings, talked with hundreds of patients and dozens of employes and while during those four years the State Institutions of Illinois were exceptionally well managed and unusually free from spoils-politics, the best one could say for the medical and nursing service rendered was that it was mediocre. The reason for this is easy to find. From the very nature of things in institutions of this kind, there is an enormous amount of time wasted on paper work and red-tape. At best, advancement is largely by seniority and inefficient, incompetent seniors never resign and rarely ever die. By the time a real efficient man gets to the top his enthusiasm has usually been crushed out by non-essentials, or if this has not happened, he is hampered by inefficient subordinates of which he cannot rid the service. In this connection, let me call your attention to the following fact, namely, that while for many years approximately one per cent. of our population has been under the medical supervision of our Federal, State, county and city authorities,

nothing of value in the treatment of diseases has been discovered by any of these departments since the organization of our government 144 years ago. Practically all of the marvelous advance in the treatment of diseases during that period of time is the result of individual effort by private physicians. When you consider the above and realize that this means that at the present time there are practically one million people under the medical supervision of the various departments of our government, is it not strange that not a single great discovery for the cure of disease has been made by any of the men in government service during all these years, and yet, for anyone familiar with all of the phases of medical practice both public and private, it is just exactly what one would naturally expect.

NATIONAL INSURANCE.

How about our National government? We are informed that Congress this year in time of peace appropriated nine billion dollars with a visible income of six billion dollars. We are further informed that in the middle of March, 1920, sixteen months after the signing of the armistice, not one single wartime commission has been abolished and each one is clamoring for more money than was appropriated for it during actual hostilities. In addition, we are informed that there are five thousand more civil employes in Washington now than when the armistice was signed. Some showing for government efficiency. In addition, we are informed that Congress sometime during the war appropriated fifty million dollars as a Contingent Fund for the use of the President and for which he was not to be called on for an accounting. We are informed that \$15,000 of this was used for one banquet and a few weeks later \$12,000 for another banquet. One week, the people of this country are urged by the federal government to be frugal, thrifty and saving, the next week, the Attorney General takes a mouthful and assures us that he is going to prosecute the profiteers, but does practically nothing, the next week we get an S. O. S. call to lend the government all the money we can scrape together and in the meantime the Federal government spends the hard-earned money of its citizens like a drunken sailor on shoreleave. This is not party politics, both parties are equally culpable. If you or I managed our affairs as badly as do most of the cities, counties and states, and even the Federal Government, we would soon be in the hands of a receiver or candidates for the poorhouse.

In spite of all of the above facts and many more that will be cited, there are still some people in this country who would like to turn over the supervision of the medical treatment of from sixty to eighty per cent. of our population and the expenditure of over one billion dollars per annum to one or the other of these governmental agencies. The mental processes of some of our ultra high-brows are beyond comprehension and are as inscrutable as is the enigmatic smile of Mona Lisa. These ultra high-

brows realize, as everyone must, that things are very imperfect. Then, instead of devising methods to simplify our government processes they try to improve the conditions by multiplying the very agencies which are the cause of the present unsatisfactory conditions. Let me illustrate by a concrete case. Some years ago, a group of very estimable people in Chicago thought conditions could be improved by establishing a department of public welfare and prevailed upon the then Alderman Merriam to draft and present an ordinance before the Council establishing such a department. The first director of the department was an earnest, serious-minded, efficient young woman, who did everything in her power to make the department an agency for good. Since then, the personnel of the department has gradually deteriorated until now it furnishes a soft berth with good pay for an administration favorite, and Professor Merriam at a political meeting which I attended last Spring, stated within my hearing, that if he should meet the department on the street he would cross to the other side and disown it as his child. This is the common experience with many of these welfare moves.

Because of the constantly growing number of office holders it is getting more and more difficult each year to dislodge an inefficient public official. In most cities the charity institutions have for years been used by political bosses to further their selfish ends and lately even the school nurses and tuberculosis institute employes have been similarly used. If, now in addition we should have a large army of Compulsory Health Insurance employes and put in the hands of those unscrupulous officials the spending of millions of dollars of the taxpayer's money it would soon become practically impossible to dislodge a corrupt administration and in that way our Republican form of government would actually be seriously menaced. We would still be a republic in name, but a bureaucracy in fact. The fact of the matter is, that we have not progressed far enough in civilization to make it safe to give this enormous additional power to any government agency and when the time comes to make it safe not even the most enthusiastic Compulsory Health Insurance proponent will be able to conjure up any excuse for it.

Compulsory Health Insurance is but the entering wedge. If this gets by the next will be old age pensions, and the next unemployment pensions and finally when we will be so bureaucratically oppressed that honest, ambitious, industrious men cannot stand it any longer the last act in the tragedy of errors will be revolution, anarchy and chaos, the kind of an experience most of Europe is just now passing through. Denmark, twenty-five years ago, was one of the most happy, prosperous and contented countries on the face of the globe, but since that time it has practically gone through most of the above experiences and is now approaching the last act. First, she passed a Compulsory Health Insurance law, a

few years later, old age pensions, then an unemployment act with seventy-five per cent. full pay during nonemployment until many working men prefer to draw seventy-five per cent. pay and loaf rather than work and actually refuse to work unless the most unreasonable demands are granted. In addition, they have just passed a law by which workmen out of employment get a reduction of fifty per cent. on essentials, such as food, clothing, etc., with the result that production has fallen off greatly, living expenses have gone up enormously and the middle-class man, the bulwark of the Nation, is literally being crushed to the wall. This time our high-brow reformers have started something with a boomerang attached to it, which, if it becomes law will give them the punishment which they will have justly earned. The unfortunate thing about it all is, that not only they, but all others will suffer because of their stupidity.

AFTER ALL ONLY A PALLIATIVE.

The best that can be said for Compulsory Health Insurance is that it might temporarily act as a palliative. It is an axiom in medicine and surgery and should be in political economy that a palliative must not be used continuously for any considerable period of time unless the case is hopeless, and while economic and political conditions are admittedly bad in this country to-day, and for that matter nearly the world over, I for one, am not willing to admit that they are utterly hopeless.

CONCLUSION.

The Puritans, the Quakers, the Huguenots and many others left Europe, braved all kinds of hardships and dangers in order to escape religious persecution. The German and Austrian 48's came to this country to escape political persecution and during the last seventy years many of Europe's most desirable citizens have come to our shores to escape these as well as other forms of paternalism. I remember only too well the story of how my dear old friend, Henry Klein, utterly disgusted by petty paternalism, in the middle 50's at the age of forty-five sold his little farm in Southern Germany, gathered up his little brood, migrated to the wilds of Wisconsin, there to work out his and their salvation under the blue sky of free America. Our government has spent billions of dollars, our people have sacrificed thousands of precious lives and suffered many privations in order to help the German people to rid themselves of autocracy, militarism, bureaucracy and paternalism. It is your duty and mine, if we would be true to the great trust imposed upon us, to fight tooth and nail in order to defeat every attempt that misguided theorists may make to impose paternalism upon us and to see to it that this country be kept as free and remain as good a place to live in for our children and our children's children as it was when we first saw the light of day.

2155 Cleveland Ave.

COMPULSORY HEALTH INSURANCE IS A SIGN OF ECONOMIC DEGENERATION.*

GEORGE L. APFELBACH, A.B., M.D.

CHICAGO.

At no time in the history of medicine has our profession been mercenary when the public welfare was at stake. Of its great service in times of war, and of its many discoveries in times of peace, the disciples of Hippocrates are justly proud. We are continually trying to prevent disease so that there may be no further need for us to cure it. With this end in view, we recognize that only a contented profession, free from the uncertainties of the future, can produce conditions favorable to the consummation of this humane idealism. If compulsory health insurance is fundamentally necessary to reach this goal of human happiness, then I am sure our profession would gladly go in sackcloth and ashes to render this form of service to mankind. But before we decide to humble ourselves to any form of menial service, we would first be convinced that our service is a real service and not a work of supererogation.

In speaking first of our national and then of our individual welfare, I hope that I shall be able to show the character of this service, in other words, I hope it will become clear whether the arguments of those who advocate this new way in which we are to serve the public, or of those who oppose it, are sophistries.

For three years we have had this matter before us, and much has been written for and against it. In analyzing the arguments in favor of the insurance scheme, I have almost come to the conclusion that its supporters never reason further than that poverty is the cause of sickness, or sickness is the cause of poverty; that we must devise some method of ameliorating the condition of the improvident and those suffering as a result of our insufficient wage system. There is no intention on the part of these people who reason thus to thoroughly eradicate the evil itself, root and branch. This is shown by its history. Bismarck adopted the ideas of Ferdinand La Salle and embodied them in the "Health insurance program," with the intention of thus appeasing the proletariat and keeping down socialism. From its history we must therefore draw the conclusion that those who are advocating health insurance are either themselves bolshevists or socialists, or are on the other side, trying to allay social unrest by throwing a "sop" to the proletariat. I shall try to prove that they are doing this at the expense of our national welfare in general and our professional advancement in particular. If the system of health insurance is advocated by the bolshevists and socialists, we doctors have but to join the ranks of the oil magnates, automobile manufacturers and other money kings and leave

the debate against these vagaries to the good people of the United States. But if the cry comes from the upper class—that the improvident must be cared for, that social unrest must be treated with a quarter grain of compulsory health insurance—we cannot afford to stand by as disinterested spectators, but must critically examine the advantages or disadvantages of health insurance; we must answer the claim that it prevents sickness and economic loss; we must also hear the voice of the farmer and disinterested producer whose taxes are increased for the purpose of helping the city proletariat to benefits which they themselves do not enjoy.

There are many even in our American Medical Association who seem to think that we have already advanced in this discussion beyond the stage of argument and that it is now time to act. Men in authority who are supposed to represent our interests tell us that compulsory health insurance is inevitable, that the representative men in the profession approve of it. Now, I, for one, am not convinced that this is the general sentiment of the medical profession, even if the literature issued by the American Medical Association has been strongly advocating the adoption of this scheme. It is a matter that should, in my opinion, be decided by the practitioners who are fully conscious of the delicate relations which exist between patient and physician, and not by a body of men who have not had any, or little, experience in the practice of medicine and are too easily misled by the arguments of propagandists. By adopting health insurance, we are completely changing the policy of our profession as over against the public. The enlightenment which has followed from the discussion of this question in our local societies in spite of the literature of the American Medical Association on this subject has prompted the House of Delegates, this spring, to unanimously vote against compulsory health insurance.

In the discussion of the various phases we must not overlook the teaching of history nor the elementary principles, of economics, for when a question of national welfare is concerned, we must form our conclusions on incontrovertible and basal facts. I shall therefore endeavor to show in the light of historical and economic principles that compulsory health insurance would be a grave national blunder, and that it might contribute to our national decay.

The general unrest which is causing so much uneasiness, and which all thoughtful men recognize as an ominous factor in our national life, existed before as well as after the war and stands in direct ratio to the development of industry in this country. Few solutions but many explanations of this social phenomenon are given; manufacturers attribute it to the unreasonable attitude of labor; the farmer to the trusts; others even slyly intimate that the democrats are responsible. Whatever cause may be attributed for this condition, the fact faces us that colossal industrial development has occurred during the last

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four decades. Ambitious men find a shorter road to wealth and opulence in industry and commerce than in agriculture. The enormous wealth resulting from new industrial methods has a greater lure than the slow but sure rewards of agriculture. Therefore industry occupies the center of human interest while agriculture is being neglected. The city populations are rapidly increasing while the rural communities are being depopulated.

INDUSTRY AND PRODUCTION.

Now, what is the relation of industry to production? Political economists differ as to what constitutes production. Some would only have agriculture, mining, fisheries and forestry embraced under this term, while all processes of refining, manufacturing and preparing for consumption would be excluded. Others, however, are of the opinion, that production includes both the material and immaterial forms of production, that is, mining, agriculture, fisheries, forestry, money exchange, manufacturing, the arts and the sciences. It seems to me that the former is the most logical, for man in his native state can develop out of the soil all the necessities for his existence. According to this view, the inhabitants of the cities are merely consumers, while those who extract the natural resources from the soil are the actual producers. Leaving this argument aside, one can easily see that if the state neglects the production of its natural resources and over-emphasizes manufacturing, it will soon run short of its raw material and be obliged to import it. This condition is always fraught with danger since foreign states may be envious of or hostile to the manufacturing and commercial policies of a state which is in need of raw material. Has not Canada recently placed an embargo on woodpulp of which we are so much in need? History proves that a nation's continued prosperity largely depends upon the conservation and energetic development of its natural resources. The United States cannot safely overdevelop her industries and commerce at the expense of agriculture and other modes of obtaining natural resources. A recognition of these principles would be a safeguard against bolshevism and revolution; for to balance the relation between industry and agriculture would mean a perfect distribution of wealth between country and city, and would be a more potent agent in ameliorating social conditions than all the health insurance schemes that have ever been projected.

The great over development of industry and neglect of agriculture has during the last few decades caused an excessive urbanization in this country. In this state of Michigan, according to Verne B. Church, there are 18,232 idle farms; 46,000 men have left the country for the big cities within the last three years. On all sides we hear of an ominous shortage of farm labor, and we are assured that farming is almost becoming impossible. While this is true, the large automobile industries in this state are paying agents throughout the rural districts to lure the country boys

to the industrial centers. This rapid and excessive urbanization, at the expense of the rural districts, is resulting in a rapid rise in the cost of living, and will eventually throttle the industries themselves.

Guglielmo Ferrero, the eminent Italian Historian, declares in his work on "Ancient and Modern America," that the disease which killed the Roman Empire was *excessive urbanization*.....To quote him:

"The impulse toward the cities increased, and one day the Empire awoke to find that its cities were swarming with beggars, idlers, vagabonds, masons, plasterers, sculptors, painters, dancers, actors, singers—in short the whole tribe of artisans of pleasure and luxury. But in the fields which were expected to feed all these men who had crowded into the cities to work or to idle, there was a dearth of peasants to cultivate the land.....The scarcity of victuals became a permanent feature of this city; and the State had to furnish the city with the famous *Frumentationes*.....The Roman Empire, instead of leaving its cities, to fight down the evil, tried to abolish it by artificial means; and those artificial means it ever applied more extensively, the more serious the evil became. Part of the urban proletariat, unable to live in the crowded cities, and seeing themselves condemned to sort of a chronic famine and gradual extinction would have returned to work in the fields. When the drain on the population of the countryside becomes too great, the evil admits of only one remedy; and that is, that life in the cities should be allowed to become unbearable to a certain number of citizens, so that they may be tempted to exchange it for life and work in the fields.....But the Roman State could not bring itself to let that evil follow its natural course. The result was that life was artificially made easier and more comfortable in the cities, and harder and more difficult in the country, whereas the natural trend of circumstances would have produced the opposite effect. The evil, treated in so ridiculous a way, became worse. The exodus of the peasants into the city increased, and brought a corresponding increase in the demands on the public purse for the amelioration of the conditions of city life. The intensification of the evil was met by an increase in the dose of the very remedy which aggravated it—useless expenditures in the cities, ruinous taxes on agriculture. Matters went from bad to worse, until the system reached the limit of its elasticity, and the whole social fabric collapsed in a colossal catastrophe."

What better argument could there be than this against compulsory health insurance and all allied measures such as the new scheme of the University of Michigan, known in Chicago as Vaughan's scheme, state medicine, church dispensaries, unlimited charities, and all the other plans concocted by the professional welfare worker in the interest of industry to keep a large proletariat from which it may draw? Ferrero further states that, "While they tided over

a trifling evil of the moment, they lay up for the future troubles and difficulties and dangers of infinitely greater gravity."

The objector may say, how about preventive medicine? Preventive medicine for the whole nation is another matter; it should be fostered and developed to a maximum degree, because it protects all classes: laboring, agricultural, professional and capitalistic. Preventive medicine is like the sentinel wolf who guards the pack against all foes, which for us human beings are especially the infectious disease.

But the palliative measures employed by industry to placate the restless proletariat have but a limited influence, for most wage earners are sensible enough to realize that higher wages, and not a sop, are the prerequisite to purchase efficient medical services. Measures of temporary relief are indeed rather inclined to become a menace to the public when they are proposed as a permanent cure by mercenary intellectuals and misguided social workers, who, because of their social standing, often exert more influence on public opinion, backed by industrial and financial interests as they are, than men of integrity, who are guided by fundamental principles and are true to their convictions.

Those who still delude themselves and the public by this phantasm of public health insurance always resort to sentiment when they are cornered. They will likely condemn my position as stated above, as soulless, although it is based on history and political economy. The world has never been governed by sentiment either in war or peace; it is ruled by the laws laid down by Adam Smith, Darwin and Herbert Spencer. Remove the opportunity for a parasitic existence, such as this health insurance scheme provides, the starving urbanite will follow his primal instinct and migrate to a more thrivesome habitat. Is the nation, with its millions of provident citizens, going to perish because of weak sentimentality for the submerged tenth? Until Lloyd George foisted this German scheme on the British, England, with great success, followed the laws which we have stated. She did not help the improvident, but she did help them out of England. We recall Mr. Micawber, who by the authority of English Law found a more agreeable existence in Australia, as mayor of a town, than in the debtor prisons of London.

After all, the highest type of social welfare can only be attained when nature is allowed to take its course. Artificial restraints and barriers may hem in nature's forces, but they will eventually break forth with an accelerated momentum.

The law of production and consumption will soon teach society that something is out of joint, when urbanization becomes excessive and our cities are developed at the expense of the countryside. When we protect and hedge about the city proletariat by artificial means, such as compulsory health insurance, allied schemes, and charities, at the expense of the

rural population, we thus better the fit in favor of the weak.

Another danger to national welfare which these artificial attempts at progress are bringing on is a bureaucratic state of society in which individualism and with it the incentive to progress are being crushed.

Modern civilization does not result from paternalism, but from individual initiative. Individualism when actuating collective groups, in the field of agriculture, labor, capital and the professions, expresses itself as competition, or collective bargaining, whereas paternalism favors only the few in power at the expense of the many. Would that we might remain a democracy that encourages individualism, and does not drift into paternalism and imperialism as so many republics have done. We recently fought for the principles of democracy, and has the great war not decided for us this issue of a paternal scheme for compulsory health insurance? We all hope for the revival of conditions as they existed in our boyhood days, during the administrations of Harrison, Cleveland and McKinley, when American ideals were still individualistic and democratic, and had not yet been infected by the canker of European paternalism and bureaucracy.

DETRIMENTAL INFLUENCES.

Besides being a national danger, compulsory health insurance is also detrimental to the individuals who are supposed to benefit by this plan.

Compulsory health insurance, both in Germany and England, according to many reports from reliable sources, has multiplied the shiftless and thriftless, legally pauperized the people and created a large army of malingers. This scheme would be a God-send to that class of individuals who philosophically hope not for riches and honor, but for ease. Why work when the doctor will keep me on the sick list in order to increase his popularity with the people in his panel? Then comes our friend the malingerer who, judging from the greatly increased number of British and German publications on malingering, appears every day with a new method of jipping the doctor. Manufacturers in Great Britain, since the passage of this Insurance Act, have frequently complained of the loss of time to their concerns on account of malingering. If sickness is an economic waste, sickness plus malingering become even more so, unless the prevention of sickness by this law offsets the evil factor of malingering.

Statistics from England and Germany show no improvement in health over those countries in which this compulsory insurance does not exist. Providence and thrift, not only in the general meaning of the words, but from the standpoint of health, are discouraged under this legislation. Young men are usually reckless with their health until they assume the financial responsibilities of matrimonial life. They fear sickness, not so much because of its evil effect on themselves, as its evil consequences to those de-

pending upon them. Under the proposed insurance act they would become more careless, and like some of our friends with automobile insurance, would speed it up, with little worry about the consequences. Instead of preventing disease, by reason of the proposed act, this legislation would have a tendency to lessen the incentive to hygienic living.

QUALITY OF MEDICAL SERVICES.

There is another important point not to be lost sight of in this discussion, namely, the depreciation of the quality of medical services rendered and the deterioration of the type of men who enter the profession. This would be a serious loss, not only in times of peace but also of war, to the whole community. The wonderful development of our profession, with its volunteer service, has nowhere been more strikingly illustrated than by its achievements during the last war. I am glad for this opportunity to address such a noble body of men. I am proud that I am a member of the medical profession, a large number of whose men represent the best in our American civilization. Our generation of physicians has fortunately not made the profession mercenary, nor has it made the treatment of disease its ultimate object, but it has sought to make medicine a science, and make all other departments of science contributive to its developments. And, what is the propelling force which has driven us on to the attainment of altruistic ideals? It is the free and unhampered exercise of individual initiative, not fettered by routine and deadening duties. How many of us, during the last influenza epidemic, in making our rounds, have not felt like a milkwagon driver, when the number of our calls would not give us time to consider each individual case with all our powers of observation and judgment, to determine the exact nature of the malady? Should we not constantly be in this state of mind, if we were working under the piece work system of this compulsory health insurance scheme? Burdened by innumerable calls, we would finally lose our professional perspective. With the adoption of such an insurance law, with its degrading effect upon a part of America's intellectual class, would not an ambitious young man shun a class which had been degraded to the rank of the proletariat? The proletariat physician would have to join the labor unions and fight with them for an existence, while the development of his science would be altogether out of the question.

But in the end the public weal would suffer most. Brend declares that three and four minutes were averaged per patient by English panel physicians for making a diagnosis. A patient recently told me that while enjoying the privilege of the German Insurance Act, she was wont to visit the doctor weekly for her complexion. Sir Francis Neilsen states that the practice of medicine in England is reduced to a question of physical endurance without regard for brains or ability.

Shall it be so with us?

HEALTH INSURANCE, CONSIDERED FROM AN ECONOMIC STANDPOINT.*

WM. D. CHAPMAN, M.D.

SILVIS, ILL.

Political Economy treats of the nature, production, distribution and consumption of wealth.

Insurance is a system by which multiple contributions make up a fund to be proportioned among the contributors in the event of calamity. Insurance can be written against any prospective loss for which figures are known.

Government may be patriarchal or fraternal. In the one a recognized head transacts the group business of its subjects in a paternalistic manner and in the other, group business is transacted by popular suffrage based on a declaration of and agreement to individual rights and proportionate individual responsibilities.

Under a paternalistic government the individual is submerged; without right of suffrage he need not accept attendant responsibilities. In a republic based on equal rights of individuals, each must bear his own responsibility else the economic balance becomes disturbed. Economic balance must start with production. When each has produced a share then distribution and consumption may proceed in proper balance. If an individual or a class is given a bonus from a general fund then philanthropy is extended and charity accepted. The acceptance of charity constitutes pauperism. Sound economics recognizes as paupers only those physically, mentally, or morally, disabled and distributes the burden of their care upon all society. The exercise of philanthropy and charity between equals must disturb the balance of their equality and is, therefore, unsound economics.

Health Insurance, so-called, comes to us from a paternalistic government, from Germany, where it was adopted in 1883 after Bismarck had said he would use social insurance to bind the working classes to the state. It has now been proposed in our republic, where individual responsibility is the foundation of government. As proposed it would pay money for time lost through illness, to certain described people; the money to come from these people in part, from their employers in part, and from their neighbors in part. Their employers and their neighbors do not share in the benefits proposed, for there is no definitely prescribed return exacted of these people. Without legal return by these people in prescribed manner, they would be the recipients of charity and to that extent, paupers. Their employers and neighbors which constitute the state would be philanthropists. That proposal in a Republic is unsound economics and cannot survive. When it can the Republic is ruined.

Insurance is sound only when distribution is proportionate with the amount paid in. No man expects to write checks larger than his deposit slips and

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continue to do well, and any insurance which permits a similar expectation is not true to the sound principle and has become a gamble. To obviate that by receiving donations from outsiders creates instantly two classes, paupers and philanthropists. These classes violate our foundation of government.

An untenable proposal, then, has been made and we are invited to discuss its details. Such a discussion should never have been permitted before state legislatures until the proponents of Health Insurance, so-called, had demonstrated the economic soundness of their plan. That it was not early spitted with logic was due, I believe, to four reasons:

1. Nobody was interested. Neither employers, employees, nor the medical profession had recognized such a need.

2. To legislators, the implied promise of the misnomer, "Health Insurance" has a public interest appeal which is great.

3. For many years, college instructors of Political Economy have depended too largely on paternal European countries for text books and training and have taught much economy which business men and legislators have had to reconstruct after leaving college.

4. A few energetic men can raise much hullabaloo by arousing hope.

The proposal as outlined in the "Standard" Bill and otherwise is one which has been known in Europe as "Sickness Insurance." It proposes cash benefit and purchasable service for certain wage-earners. That is insurance. It does not assure good health and does not offer an concrete plan for the improvement of health although it does make mention of the desirability of improving the public health. That is conversation. It lent to the proposal its human interest appeal. "Sickness Insurance" is correct nomenclature. Upon realizing this difference many persons have reversed the first impressions created by the more appealing title.

Health improvement and disease prevention we know to be matters of Hygiene and Sanitation. They are separate from calamities against which we would carry insurance and should receive separate consideration.

Sickness Insurance, which is the payment of cash money for lost time, can never prevent the loss of time; it can merely compensate. It is separate.

The proposal is that sickness insurance be compulsory for certain wage-earners and for nobody else. Why should one kind of insurance be compulsory and all others voluntary? I have read that voluntary sickness insurance has never been a success in any country where it has existed—truly a poor reason for compulsion. Why should one man be compelled by law to carry one kind of insurance and his neighbor not? Possibly the plan must be limited to industrial workers because these may be subjected to payroll check, while the rest of us are less readily accessible for compulsion. That is an excellent reason for limiting, for the word "compulsory" implies enforcement; enforcement implies constables and

penalties which call forth visions of jail sentences and lost time for citizens who have failed to pay their weekly dues. The limiting, at least, is wise but it is not yet explained why anybody must.

The cost and the economic results of this untenable proposal, supposing that our Constitution had been changed to permit of its adoption, have been made the subject of extensive research by several state legislatures. Illinois paid twenty thousand dollars for a two hundred and sixty-seven page report. The California, Connecticut, Indiana, Maine, Massachusetts, Minnesota, New Jersey, Ohio, Pennsylvania and Wisconsin legislatures have appropriated money and appointed commissions. Their reports give some figures which are of interest for the personnel of the commissions has been of mixed opinion. That their figures are very rough estimates is evidenced by the United States Commissioner of Labor Statistics who writes that his office has no information as to the average earnings per man of wage-earners in the United States. If that office has it not, then no other office has and without knowledge of average earnings there can be no knowledge of average compensation for lost earnings. However, the American Association for Labor Legislation came forward with a set of figures. The state commissions have endeavored to estimate and have been lenient in dropping their estimates toward the figures of the A. A. for L. L. and have published their conclusions. I quote from the report of the Illinois commission—May, 1919:

"The cost of Compulsory Health Insurance in Illinois would be between fifty and sixty million dollars annually, conservatively estimated. * * * If existing Health Insurance carriers were used and continued their present amount of insurance, there would remain between forty and fifty million dollars to be carried in state or local funds established. This would inevitably lead to political control and management." This, I remind you, is for care and compensation only; no plan is in the bill for lessening the incidence of illness.

Private carriers state their expense of administration at 60 per cent., leaving only 40 per cent. for compensation.

Dr. Ochsner shows us the habit of increase which administration charges have under state control. For the state of Michigan the annual cost has been estimated at fifty-five million dollars. I ask you to visualize for an instant this, which is not insurance—hypothesis, Michigan proposes to buy annually fifty-five million dollars worth of instruction and practical application in Sanitation and Hygiene, a known article of proven value. Imagine the vast machinery and wonderful work Michigan could accomplish with fifty-five million dollars every year for the one purpose of preventing illness—or Illinois with sixty million.

I again quote from the Illinois report:

"There is no evidence that Compulsory Insurance has resulted in an improvement in health" referring to countries in which the plan operates.

After months of research and listening to the detailed claims of advocates and reviewing statistics and reading reports from other countries this commission believes that there has been no improvement in health and, further than that, it is convinced that it has heard not any evidence which tends to substantiate a claim of improvement.

The Illinois minority report concludes:

"Insurance supported in part by industry and the public may cause a greater interest in the prevention of disease."

It may, and has not. Sixty million dollars would, and has.

The cost estimates of the commissions acting for other states are proportionate. I pass them to avoid the confusion of an avalanche of figures and turn, for a moment, to figures for the nation, the A. A. for L. L. has estimated the average annual wage loss due to illness at five hundred million dollars or over. The National Industrial Conference Board has stated a conservative estimate as from five hundred million to seven hundred and fifty million dollars for forty million workers. This Board makes conservative estimate of the cost of Compulsory Sickness Insurance for the country at large at not less than seven hundred and twenty million and perhaps not less than one billion dollars per year. These lowest of estimates show the cost of the scheme to very far exceed the wage loss it is designed to partially compensate.

Since the money comes from the public instead of from the usual insurance source, there would be greater logic in eliminating the vast machinery, hiring the accountants only, and paying the bill.

There are no exact figures concerning either wage loss or the cost of Compulsory Insurance. However, the estimates of annual wage and wage loss are based on real figures, known and, at the time these estimates were made, more or less constant; while the cost figures of Compulsory Insurance are entirely speculative. In using these lowest estimates we should remember that where State expenditures are concerned advance estimates in the past have always been low. This might easily cost twice the estimated amount and we pay a billion and a half dollars annually to compensate a half billion dollar loss.

Now suppose for a moment—hypothesis: The Federal Congress has made perpetual appropriation of one billion dollars annually for the prevention of disease and for public instruction in Sanitation and Hygiene. Would that mean anything to you? Could it help those forty million wage-earners to stay on the job and would it increase their economic output? It would.

In 1910 the census showed thirty-three and one-half million wage-earners in the country who would come under this law. Of that number it is estimated that one in ten, or three million three hundred fifty thousand would become industrial discards because of age or physical condition; because an employer who is to be responsible for a part of a man's

sick bill will hire only proven healthy men. These millions of men then, could not obtain living employment, would not participate in sick benefits and would become legitimate paupers through disability, and the cost of their care would devolve upon society as an additional burden. Being bound to the state in such fashion may have been desirable in Germany under Bismarck but it has not yet been proven to be desirable in a republic whose virility depends always upon the initiative of its individual members.

At this point the proposal has been shown thus:

It violates known rules of Political Economy.

It assumes paternal powers and cares for a paternal government.

It claims to be Insurance but advertises as Sanitation.

Its results is one of compensation at public expense; a thing which could be better accomplished by direct taxation and accounting than by the cumbersome political machinery proposed.

Its cost is out of proportion with the resultant compensation.

I should prefer never to have read any of the details of a proposal which makes such a picture as that, but, if it is necessary that details be considered, I invite attention briefly to this:

The insurance proposed in what has been called the Standard Bill is faulty because the chronic invalid pays no more than the robust young risk; the man with six children to receive medical attention pays no more than the single man. In sound insurance, preferred and hazardous risks are proportionately rated, always.

The thrifty and the shiftless are classed together in that they would benefit equally. This un-American principle would discourage thrift.

The proposal would place a burden on industry which industry does not create. Occupational diseases should be charged against industry. All others, and especially the three big ones, tuberculosis, pneumonia and typhoid fever, are chargeable to public indifference and to private shiftlessness, neglect and ignorance. By making industry carry that private burden a preferred class of employes would be created—the young, robust and unmarried man. A handicapped class would be created—married men with families, all men past middle age, all limited service men. No employer would select men whose cash compensation, or medical and hospital service would be expected to cost more than the average of preferred class.

A discussion of details is endless. In Germany, after thirty-six years, it is still going on; changes are now being made. Physicians there have been making professional calls at eight cents per visit and living on their incomes. To do that necessitates many visits. Many pieces of work at small remuneration cannot make for professional advancement, the ideal of the professional conscience is much consideration and exhaustive inquiry for the individual case. Our chief value in this matter lies, for the present, in dispensing advice which rings true to basic principles

of economy, of government, and of our Constitution. Our best personal interest rests upon the well-being of our clientele.

REFERENCES

1. Constitution: Art. 5. "No person shall be deprived of life, liberty, or property, without due process of law; NOR shall private property be taken for public use without just compensation."
- Art. 14. Sec. ONE. "No State shall deprive any person of life, liberty, or property, without due process of law; NOR deny to any person within its jurisdiction the equal protection of the laws."
2. Report of the Wisconsin Special Committee on Social Insurance: page 18.
3. Report of the Wisconsin Special Committee on Social Insurance: page 12.
4. Estimate of the Insurance Economics Society.
5. Six New York physicians connected with large employers of labor compute that 8 per cent would be rejected because of physical condition. Two per cent would be over 55 years of age and be rejected by carrier associations. W. G. Curtis, Dec., 1916, before the Association of Life Insurance Presidents, New York City.

DISCUSSION ON HEALTH INSURANCE

Dr. Victor C. Vaughan, Ann Arbor, Michigan.
Mr. President and Fellow Members:

I am dreadfully disappointed that the proponents of compulsory health insurance are not here, and am greatly pleased with what I consider the good sense of those who are here, that they oppose it. It seems to me that this has passed the stage when there can be any special theoretical consideration. Germany has had compulsory health insurance for a great many years, as we have been told this morning. Other European centers, Austria, and Dr. Ochsner says Denmark has adopted it, and England has more recently adopted it. Now what has been the result? Let us take infectious diseases, just for a moment. Up to the beginning of the war, I don't know just what has happened since the war, Asiatic cholera has not been kept out of Germany. Time and time again it has been found there. In our own country there has been no cholera since 1883; although cholera has repeatedly knocked at our doors, it has not gained admission. I will return to that in a few moments. Another thing, when we got into the war, editors of journals, magazines, and sometimes newspapers sent to the Surgeon General's office a number of articles now and then, in most of which the writers of these articles extolled German medicine, both curative and preventive, and condemned our own. They pointed to the great superiority of German scientists. Most of these letters were referred to me, and I took great pleasure in attaching my opinion to these articles and returning them to the editors, but I never saw them printed. I simply recalled to them that, at no time in the history of their country, or of the world, so far as that is concerned, has the death rate been anything like as low as it has been in the United States of America. Now, after all, that is the final test. We may argue about morbidity here and there, and about mortality here and there, but in Germany, where compulsory health insurance has been in vogue for a long while, the death rate has never approached in lowness the rate in this country. Now, I am glad to see that there is universal disapproval of compulsory health insurance in this country. I do not

think it has a leg to stand on. As Dr. Green so ably showed us last night, it is not insurance, it has no health problems connected with it. It is simply an attempt to improve the outlook of labor, and it originated, not with a laboring man, but with the man of all men who is most antagonistic to the laboring classes.

I want to say that it struck me that the papers that have been read this morning were excellent. They were inspiring papers, but, if I caught Dr. Ochsner rightly, it seems to me that he has gone a little too far. I understood him to say in his splendid English—and I admire the way in which he martialed his arguments—I understood him to say that practically every advance in medicine had been made by volunteer or independent practitioners of medicine. If he did not say that, it must be my poor hearing that is to blame. I wish to call to your attention that I think that we do not realize what we have here in this country, notwithstanding our political corruption, and I believe everything Dr. Ochsner has said. I must admit that he has had better opportunity to observe it than I, living in Chicago as he does. I sometimes get dreadfully discouraged and wonder whether our Government is a failure or not and I do not realize that, if man in the mass moves far enough, you have to take a different viewpoint as the years pass. I am much older than Dr. Ochsner and, so far as federal politics is concerned, I had something to do with the organization of the Medical Corps of the Army in 1898, and I know how rotten it was. The Congressmen and Senators insisted on this man and that man being made officers, and so forth. I do not mean to say that these things have entirely disappeared now, but conditions are very much better. During the recent war there was a doctor in Ohio whom I knew about, who was of rather doubtful professional repute and who wished to be commissioned and wanted to be a major. He wrote and came in several times, and one day he came in with the air of "I have you now" and said, "I have a letter from my Congressman." He handed me the letter and I opened it, and it ran like this: "This man is from my district. He says he voted for me; probably he did. He thinks he ought to be commissioned and thinks he ought to be a major. Don't let him bulldoze you. Do what you think best." But there are more serious things in the Surgeon General's office.

I am inclined to think that these gentlemen, in their zeal, have hit some things that are of great importance. Now, my dear friends, we enjoy comparative freedom from illness. Do you know how that is done? Take Italy, for instance; I went there when cholera was present in all their cities. I spent weeks in the cholera-stricken cities and I watched how cholera was kept out of the United States. We had, in Genoa and Naples, officers of the Public Health Service, and everybody wanting to come to America was kept under observation for five days and then thoroughly disinfected and not allowed to

bring any fruit, and I got on the boat and came with those men coming from the cholera infested parts. I traveled first class, but watched the steerage, and made examinations all the time, and we reached quarantine station with about thirty or forty cases of cholera and cholera contacts on board. The stools from thirty-four thousand people were examined that summer, and, from fifty cases of cholera that were detected, not a single one got in. Why? Because the Public Health Service prevented it. Now, when you strike compulsory health insurance you can't strike too hard, but don't give all the applause we have to the private practitioner in medicine. He has done a great many things, but we must be careful to recognize the fact that preventive medicine has played and is playing a very important part. It is true that most advances in curative medicine have been made by private practitioners, but I have only to call your attention that when we condemn government medicine, as I understood it to be condemned, we must remember the people who kept the plague out of this country. In New Orleans, where I went a few weeks ago, the most interesting thing I saw was the laboratory of the Public Health Service which I visited. That morning twenty-seven thousand rats were brought in from the nine thousand traps set in the city, and every rat was examined carefully. That is what our Public Health Service is doing for us, so don't say that all the advantages and all the benefits come from the private practitioner and that none of it comes from government health officers.

Now, I did not get exactly what the other doctor said about Vaughan's ideas, but it makes no difference about that. He read a splendid paper, and I don't know whether he was criticizing me or praising me. He called attention to a matter which is of very great importance, and his quotation showed what all of us who read history know. This is not unusual, it has happened time and time again, over-urbanization. That is what killed Italy and the Roman Empire, and that is what is threatening us today, and there is only one thing that would drive the people back to the country, only one thing. You may say all you like, use every argument, but there is only one thing to drive them back to the country, and that is the scarcity of food. There is every inducement today for the young man to go to the city. Every inducement, I care not what his ability may be. The New York Board of Health had a few years ago a very striking chart. They began I think about 1890 showing the death rate of children under one year of age born in rural New York and those born in New York City. When those charts were begun, the chances of life for the child born in rural New York were greatly superior to those of the child born in the city of New York. Those things have changed, and the last time I saw the chart the chances for the child born in the slums of New York City were greater than for the child born in the rural districts. There is no reason for the people to go back to the country unless they can go back under proper hygienic

condition. Take tuberculosis, we think it is a disease of urban life, but it is a disease of homes. In Ireland the death rate from this disease is higher than in England. It is the housing, and we should try to do all we can to make for the rural districts the same conditions of living that the people have in the city. Take the city of Chicago, with a death rate of 1.5 per one hundred thousand from typhoid fever. There is not a rural community, I dare say, I have not looked it up, that has so low a death rate from typhoid. I know that, in New York state, the lines of typhoid fever in that city and the country have crossed, just as the other lines have crossed. What we are asking for in Michigan is that there shall be the same health service in the country that we have in the city. Somebody said that was all right with preventive medicine, but it must not touch curative medicine. I think, in dealing with diseases, it is impossible. Then look at it from the standpoint of the profession. What we are urging in this state is that there shall be hospitals all over the state, just as common as the high schools. These hospitals shall come up to a certain grade and shall have enough beds and equipment to make them first-class, and they shall have a well-fitted staff, and they shall be the center, not only of preventive medicine, but for curative medicine. A bill was introduced a few weeks ago in the legislature of New York state which probably states this better than any I have seen. Now, if we have hospitals in every village and have internes and nurses who, when a sick call comes in, if the patient is very sick, will take them to the hospital and care for them, the people shall pay in proportion to their ability, and there will be no medical charity. Why should the doctor work for nothing when the grocer and the dry goods man will give neither food nor clothing without pay?

That is the attempt we are making. It is simply to extend to the whole people everywhere, and that is the thing we have to offer in exchange for the compulsory health insurance.

Now, I am in sympathy with the laboring man. If it ever comes to a fight between the proletariat and the aristocrat, I am with the proletariat, whatever it may be. I am with the common man; I belong to the common people. I was born a member of that class, and I have never striven to rise above it. I live in it—I am a worker and I sympathize most thoroughly with the laboring man that his hours of labor shall be shortened. Still, when the laboring man asks for a six- or eight-hour-day law—I say to you that, if every able-bodied man went to work, we would have all we need to live. Agriculturists tell us that to make the land produce to its greatest capacity, even by crude methods, requires, during the summer, only 220 hours of work. The trouble is that the essentials of life, when narrowed down, are these: food, clothing, shelter, and fuel. There is nothing else essential to life. Money is helpful now and then, but less than 50 per cent of our population is engaged in the production of these fundamental

essentials, food and clothing, without which the nation is doomed to die. It may be a subacute death, but it will surely come, unless conditions are changed. And, gentlemen of the medical profession, it is in our hands, more in proportion to our neighbors, than any other class of people to help this nation out at this time, and demand for all conditions and all classes of people protection from disease. It is not for the laboring man, or the rich man, but to all alike, with no class distinction. We labor for the good of the whole.

AFFIRMATIVE.

Mr. John A. Lapp, L.L.D., Editor Modern Medicine, Chicago, Illinois.

I wish to state first that I am not a doctor. Not long ago, my little girl, who is just getting initiated into the mysteries of life, was asked "is your father a doctor?" and she said "Yes, he is a doctor," and then, after thinking for a few moments, she added "but he is not a *real doctor*." I wish really that the word "doctor" had been left to the ancient and honorable profession, and that it was not applied indiscriminately to a class of people, most of whom do not deserve the title of "doctor."

I am sorry I did not have a chance to hear what the speakers on the other side of the question may have said. I am inclined to think what I am going to say is not going to be in agreement with what you have already heard. I am in the embarrassing state of giving the contradictory statement direct. I do not know what anybody has said, and, therefore, my statements will have to be taken as in opposition to everything that has been said.

I am a little bit embarrassed, too, because the delegates from this Society are among those who religiously condemned all health insurance at the recent meeting in New Orleans. We are in the position of trying the person after he has been hung. However, the question is still open, even though the resolution has been adopted, and it will not down until some solution is provided.

If the ideal which has just been stated before you is ever realized, so that all people will receive medical service within their ability to pay, that side may be killed by that means. That would be Utopia, but, if I may judge from New York and the reception the plan received there, I should say that plan is about as far off as is compulsory health insurance itself. If that time comes, and I hope it will, we can well eliminate the medical side from health insurance and consider only the question of providing cash benefits for the man when he is sick and unable to earn. When the man is sick he cannot work; when he cannot work he cannot earn money, but his expenses go on just the same, their obligations must be paid. If a man loses three months, six months, or a year, it is a pretty serious thing in the life of the average man, who is only a few days away from economic distress, as a rule, when sickness hits him. Compulsory health insurance is to smooth out what happens in these cases—it is for many things. No

one would go without fire insurance these days, because fire is a serious thing for anyone, and we have fire insurance to distribute that loss over the whole people. We have accident insurance, we have accident and health insurance, we have liability insurance, we have burglar insurance, we have life insurance, and a great many different kinds of insurance to smooth out these things and to make it certain that no calamity shall hit this individual or that individual and drive him down into economic disaster. Insurance is an old principle, and the purpose is to apply it to sickness, which is a disaster in the life of any individual, but which is not so great in the concrete.

I will prove that the maximum average is nine days lost for each of the workers. If each person averaged nine days of sickness, there would be no need of insurance. Everybody could carry his own risk if insurance was on the average of nine or seven days to each individual. But sickness does not fall that way. A few of us escape, the rest bear it all. Sickness falls this way—eighty per cent escape. In any year, among the great average working class of people, twenty per cent bear the entire burden of sickness for the year, and, of this twenty per cent, sixty-five per cent are sick for less than twenty days; the rest bear the great volume of sickness, a comparatively small number. Eight hundred thousand escape; two hundred thousand are seriously sick; of these, one hundred and thirty thousand escape with less than sixty days; therefore, this sixty-five or seventy thousand people must bear the great burden of sickness. Of these, forty thousand are sick from four to six weeks, fourteen thousand are sick from twelve to sixteen weeks, three per cent of this body of working people are sick for more than six months, and thirteen thousand are sick for more than a year. Given a body of independent workers today, that is the picture: more than twenty-six hundred will be sick for more than a year, six thousand of them for more than six months, and it is that disaster of sickness which falls to those people that insurance is intended to smooth out, and make it fall over all the people, so that we can average the sickness existing to those people.

You doctors know what happens to the average man when he is taken sick. What happens in the first instance? He uses up his savings, his credit sometimes; a few men have enough to last them a little while, the great body of people have not. They are in distress within a few weeks and must depend upon someone to give them credit or relief within a few weeks. The next step is the Morris Plan Bank—a great institution which lends them money at a nominal percentage. On investigation, we found that a large per cent of their loans were made to men who are in distress on account of sickness. Where there are no such banks, they must resort to the chattel loan and they borrow money at 4 per cent a month to tide them over sickness. In the state of Ohio we found that 35 to 50 per cent

of all their loans were made on account of serious sickness, to tide men over the economic phase of sickness. It is pretty serious when men have to borrow money at $3\frac{1}{2}$ or 4 per cent a month, and that is the lowest per cent in our cities. If that sickness lasts, imagine the thing that will come to these people. The next resort is the charitable or relief institutions. The great per cent is given on account of sickness, and in the class that receive public relief the amount is still more; although this is not exactly measured, forty per cent are there because of the disaster of sickness at some time in their lives. They happen every day, and everybody knows they happen, and they are driving men down to lower levels. It is not uncommon to find men who are handicapped for life through a sickness at some time in their life. Not long ago, a man in England said that he had been so handicapped by sickness that it took him six years to get on his feet, from the results of that illness. If there is any way possible by which the cost of sickness can be distributed over the whole body of people so that no one will suffer the disaster of sickness, I think you will say it is a good thing. I can't imagine anybody protesting against it; the only thing is that we propose to put it on the universal, compulsory stage, just as we have made the accident insurance. Everyone will admit the social or medical value of distributing sickness by the insurance. Shall we adopt a compulsory health insurance plan? The insurance is already being carried privately. Possibly 2 per cent of the burden of sickness is now distributed by existing agencies, leaving 98 per cent to fall upon the individual who happens to be seriously sick. We found that the better class of workers carry some kind of insurance, that usually amounted to from seven to nine dollars a week, without any medical care to speak of. The burden of sickness is not now being distributed. There is no universal insurance in this country, except so far as employers have their employees share in medical care. There are many plants in this country that are employing hundreds of thousands of men who are getting the same service and the same plan that it is proposed shall be provided in compulsory health insurance. It is not enough. Eleven states have considered this subject; six came out for it, four against it, and one tentatively accepted it, but asked for further time to consider the question. Six states have decided definitely in favor of compulsory health insurance, and a man from the one that investigated and in which they made a very exhaustive report, has told me time and time again that the tide was absolutely and completely toward compulsory health insurance, but the commission did not look at it from that point of view.

It has been in force in other countries, and you have heard about this from the other speakers. They have had it in Germany for forty years, in Austria for a long time, in England just since before the war, in Norway, in Switzerland, and in some parts of France. It is quite universal in those countries and

also in Australia, where compulsory insurance beat out the state business. It is quite universal. Shall we consider the principles as applicable to state conditions?

Sickness has the same effect in Germany as in the United States. Men are hit by sickness and go down, perhaps not to poverty, but toward poverty. That is the class we are interested in. We do not care for those below the poverty line. They have to have working capacity, and if they have working capacity, you should insure that capacity that there they shall not be driven down to poverty. It is a means of preventing people from going down into poverty, from slipping down as we see them slip all the time.

Has it worked well in the other countries? The best answer I can give is that not in the history of any country has there ever been a single backward step taken. Not only that, but every year more is taken to cover the job more completely and better. Is there any better testimony than that for forty years it has been observed and planned, and during these years there has never been a single step backward? That these people like it and would not get along without it. Even now in the German republic, torn as it is with disaster, there has been in the last month an extension to other groups to which it shall be extended.

I have in my pockets three statements which I wish to put in the record. One is by Alfred Cox, of Great Britain, who says it is quite universal, and that in Great Britain the doctors are satisfied with it.

One is a statement from the British representative at the employer's conference, in which he says he has never heard, in all his experience, coming in contact with the employers of England, that they think it is a failure or have had difficulty in adjusting themselves to it.

Another is from the editor of a leading trade journal to England, in which he says it would be impossible to repeal this act. They said in California, when they were there, that an attempt to repeal this law in England would result in revolution.

Last week, in New Orleans, a man who went over to investigate the subject said it was an absolute failure. He made the case so strong he destroyed it in the minds of those men. But immediately following him came a distinguished doctor from Glasgow, who had been sitting quietly and listening, and whom nobody knew was there. He came to the platform and courteously but completely refuted everything this man had said, so completely that this man must have felt like thirty cents! This was a man who for seventeen years had been on the examining board of Great Britain and he said the insurance act was not only successful, but that the doctors approved it and would not think of going back to the old system. That was the statement from the examining board of England, and this doctor, who had worked for seventeen years on that board. It is no different than it would be in this country if you sent a man here

and there in this country to investigate the Medical Workman's Act. You would find in some instances that it was very unsatisfactory. I do not doubt but that in some instances you would find some who still condemn it and say it should be repealed, but no one who knows conditions would say that the Workman's Compensation Act should be repealed. On the other hand, it should be extended and the medical care made more complete. For my part I am satisfied; I am satisfied that that condition would prevail.

As to its adoption in this country. We have not, in the proposals made in this country, taken any models, but have tried to take the experience in foreign countries and work out a bill which would work in this country and have a thorough working plan. If you will examine that bill honestly and completely, you will see that in the main the plan that has been proposed in New York does leave private practice just about as nearly as it is now as any plan under the sun could possibly leave it. It is a plan by which we seek to disturb as little as possible the position of the physician and patient. Under it the physician has free choice; he can reject the patient if he does not wish to take the case. He does not serve under a panel, but as a private physician, and presents his bill for his services on an arranged schedule fee, fixed by the medical society, presenting that bill to the insurance company to which this man belongs. The differences primarily consist of the fact that the insurance company pays the doctor when the patient is not in a condition to pay. We must see to it that the profession is protected completely and absolutely, because the medical growth depends upon material success. It must. Men must earn enough to live on. How has that scheme worked out? We have adapted those conditions to American conditions and have tried to obtain the best they have today. The plan is working out in this way in most states: the County Medical Society is asked to formulate a plan of medical service and fix a fee for that county, and that is presented to a commission with a physician at the head of it. The commission considers this plan that is presented to the County Society. If they do not accept it, it is referred back to the County Society, and, finally, if the conditions are not satisfactory, a board of arbitration can be asked for, this board to be made up of five members, two chosen by the physicians, two by the insured people, and one by the governor. If there is any way in which justice can be obtained for any body of men in this country it can certainly be obtained by that. First a hearing, then a re-hearing, and, finally, a board of arbitration. This takes it entirely out of the hands of bureaus to decide or plan the fee that can be charged. If there are any other safeguards they should be put in, but, on serious consideration, we have been unable to see anything else that could leave them as they are today. That is the plan in New York, and I dare say there is not even one physician in the country who has taken the time to really analyze it and take it home and study it. I

have had men get up after reading the bill and repeat the same old thing about a twenty-five cent fee. A man got up in front of me a few days ago and said they had suggested a twenty-five cent fee. I said "Where did you get that stuff?" I know of no one except the Casualty Companies that expect that. This was in the face of my statement that the fee was two dollars and a half, but that is the type of thing that is going on in this country, and it is an unfortunate thing that the physicians of the country should take that type of testimony instead of analyzing and getting the truth of the subject. Many things have been said, many of them in Michigan. I have read some of them and been somewhat surprised. I have just recently seen a statement from one of your societies asking the American Medical Association to get rid of Rubinow (?) and he has not been connected with that Association for nearly four years. He has been out of this country for two whole years as the head of the Medical division of the Zionist study, and yet in the State of Michigan a resolution was passed condemning the American Medical Association for having him! I am glad that Dr. Andrews could not come today, because I can say things I could not say in his presence. If every one of you knew the splendid things that are being done by the American Association for Labor Legislation I am sure you would be surprised. The men who are the executive officers of it are the best and keenest minded, far sighted men in this country. They are employers and labor leaders of all types. Do not doubt this, but take the list and look it over carefully.

It is said that we have one invaluable substitute for health insurance. People say "let us prevent sickness instead of compensating for it after it has occurred." Of course you do, under any plan that is adopted, want to go the limit on prevention, but prevention is not in any sense a substitute for taking care of the disaster of sickness when it occurs. For, after you have done everything that you can do, you will still have cancers and will still have infectious diseases and degenerative diseases, and people are going to be hit by that calamity. You may prevent twenty, thirty or fifty per cent in the next twenty-five years and here will be that much less insurance needed, but it is not a substitute.

It is said that this is a German proposition. It is said to have been born in Germany. It was not at all. It simply culminated there into one universal system. It had been in existence for several years in other places and when Bismarck was working on that plan he wrote to the Baltimore & Ohio Railroad for information as to how their plan was working out! I dare say you didn't know that, but that letter was in existence for many years. It has since been lost, but it was in existence for a long time. This plan may have been worked out in Germany, as many things were, but we are not going to do away with all the plans that we get from Germany. Although I really think vocational education caused the war, we are not going to do away with vocational education

because it originated in Germany, or with many medical discoveries because they originated in Germany. Not at all. We are going to adopt everything we can in the world. It is a remarkable fact that, right down to the moment the war started, the flow of physicians from this country to Vienna never stopped. They had health insurance in those countries, but that did not destroy them. Dr. Hayhurst said it had the effect of turning the attention of the physicians of Germany toward the study of industrial diseases, and instead of the old type, we had gained enormously in industrial medicine and there was great improvement in hygiene, because the workers got sick and if this could be prevented less insurance would be necessary. As far as the observer could see it, it had no effect except to turn the attention in that way. We went there up to just before the war and we will probably go there afterward if they have anything to show.

It is supposed to be destroying the English profession, but in a recent number of the London Medical Journal it is stated that the English profession was much worried over the influx of young men in Great Britain into the medical schools, because they were afraid the medical schools would be overcrowded. If this was such a great disaster, would the medical schools be overcrowded?

We have been going on satisfactorily, with no great deterioration, no great benefit, and none was expected, except the study of industrial diseases. It has had no serious effect on the medical profession. Those are some of the principal things that have been urged against health insurance. The idea is that it will cost too much and many figures have been brought to prove this. Sickness occurs now and somebody is bearing it; doctors have a great deal of it to bear in charity work, in bad bills. Charity organizations are bearing a lot, and individuals are bearing a whole lot, and if the individual cannot bear the burden now, what can be done in the future? This is a serious question. It is not one that can be downed by resolutions. It will be before us until some solution is brought forth. No medical group, or anything else, will ever still it very long. We have provided for medical care and, crude as the system is, it is being extended right along, step by step, in every state. That same idea will soon begin to be adopted here and there in a large way or a small way, and it will be extended because it is in the genius of the people who think socially. It is bound to come eventually in some form or another, just as surely as we are assembled here, and the only thing I plead is that the medical profession give the earnest, thoughtful attention to it that it deserves, to see if it is going to be harmful to the public they serve, to see how it may be modified when it comes, so that the best good may come of it. If the doctors stand opposed to health insurance, tooth and nail, oppose it, as they did in England, right down to the moment of its adoption, they will have little influence when it comes, and that will be too

bad, because the medical plan should be worked out completely and carefully. The doctor should take the lead on the medical side of this, should understand it fully and be ready to accept parts of it, if parts are acceptable, and not oppose blindly every phase of this question. It is apt to be bad for the people. Honest, careful study and the employers and medical profession working together will bring about a compromise that will preserve the profession in its present dignity and give it the chance for advancement that everybody desires.

REBUTTAL

Dr. Edward H. Ochsner (replying to Mr. Lapp):
Mr. Chairman, Ladies and Gentlemen:

I am very glad that Dr. Vaughan misunderstood me, because he has said most of the things that I would have said if I had had the time. If he had stopped about two hundred words before the end I would have agreed with him completely. I said that there had been no addition in the cure of disease by the paid employes of city, county, state, or nation; no advancement made by these employes in the one hundred and forty-four years of the existence of the American government, and I repeat it, and I defy any man to prove otherwise. When it comes to the question of prevention of disease, that is an entirely different proposition, but the minute organized government goes out of its course and tries to treat disease it goes out of its province.

Dr. Vaughan: How about the treatment of diphtheria?

Dr. Ochsner: It is no better under state control than under private control. In the City of Chicago, the city loses more cases than private physicians do. I can prove that with figures. In state medicine, the prevention of disease is and must always be the function of the state.

The Public Health Service of this country has rendered a marvelous service. Walter Reed alone has justified every dollar that has been spent by this country for sanitation. But in the treatment of disease the thing is quite different. I spent four years in the service of the State of Illinois. The best that can be said of the treatment is that it is mediocre. Nothing for the cure of insanity has come out of its institutions.

I will go Dr. Vaughan one better: I was born of the common people, and I hope to die of the common people. He said he hoped he would never rise above the common people. I hope I will never degenerate into aristocracy.

Gentlemen, we have heard this bunk for four years, namely, that compulsory health insurance is going to come. Don't believe it! It is not going to come in free America! Let me tell you a little medical history. Four years ago the Chicago Medical Society appointed a Commission on Health Insurance. That first Commission went over to the American Medical Association, and the gentlemen at 535 Dearborn Street said, "Get into the band wagon—it is going to come."

The first report of that Commission was to this effect: "while we do not believe it is a good thing, the best thing the medical profession can do is to get the best terms it can." On the 11th of December, 1916, the West Side Branch of the Chicago Medical Society pulled off a stunt on medical insurance. Nine speakers were invited to take part in the discussion. Five of them gave us the kind of talk which we listened to just now—I want to compliment Mr. Lapp on it. Three of the men said, "It is going to come, let's make the best of it." They invited me because I was President of the State Charities Commission, and they thought I should know something about it. I did know a little something, and I said, "Gentlemen, it is a mistake; do not believe all you are told." I told them that it would be the most serious mistake that could happen to American medicine if compulsory health insurance should be adopted. I took the thing so seriously that I wrote to the President of the North Side Branch of the Chicago Medical Society and asked to be permitted to read a paper there. I read the paper and it was published in the *ILLINOIS MEDICAL JOURNAL* and in the *INSURANCE AGE*. I think that was the first paper that was published in this country opposing compulsory health insurance. Since then men have been thinking, even at 535 North Dearborn Street. I am told that Dr. Green delivered a brilliant address here last evening against compulsory health insurance. I am glad they have seen the light! They will see more the more they study the problem.

I am very glad that Mr. Lapp said we were going to have \$2.50 a call, but I am making a guess that when the bills are paid, not one billion, but three billions, will be required, and who is going to pay it? He says the workers are paying it now. Not that much. I will tell you why. Because, under compulsory health insurance the number of calls double and triple. If you give people free medical service they are going to run to the doctor for every little belly-ache. Let me give you the evidence. About 1912, the University of Wisconsin adopted a system of a cross between charity and compulsory health insurance for their students. During the sixteen weeks of the fall semester of 1914-1915, the health insurance physician of the University of Wisconsin made seventeen thousand examination on four thousand able-bodied men and women in that university. Do you imagine that they needed that many calls? They got them because they did not have to pay for them. This is authentic; I heard the Dean make the statement to a Legislative Committee. When I cited these figures before the Wisconsin Commission, one of the members said, "Doctor, that is impossible; that cannot be true," but good old Senator Albers replied, "Yes, Mr. Olds, it is true; I heard it with my own ears."

The cost of compulsory health insurance for the American people will be stupendous if they are going to run to the doctor for every little ache and pain. What does the doctor do? Does he sit down and

tell them that they must live so and so, in order that they will not be sick? No, he writes more and more prescriptions for medicine, and the result will be that the medicine factories will have a hard time making enough. I was for five weeks assistant to a panel physician in Leipzig, and those people came for every little thing. It was an ear, nose and throat clinic, and they came for every little blooming thing that they would not come for in America. They came because it was free and they were getting two-thirds pay while they were not working!

Mr. Lapp told us that the average sickness was nine days in America, but he did not tell us that, while the average was 11 days per year in Germany before compulsory health insurance, it rose to 15 days afterward. That part he did not tell us. Why? If it is the thing we want, it should reduce the morbidity and mortality. If it does not do that, it is no good. That is the test of the whole situation, and it does not do it. I have heard many proponents, but I have never heard one of them say, and give the evidence, that compulsory health insurance has either reduced the number of sick days or reduced the mortality. I have had them *try* to explain why it does not do it.

There is another, and principal, reason why it increases the number of days, and that is malingering. I see some elderly gentlemen here in this audience; I wonder whether they have ever known before that there is a crisis in practically all diseases in countries where there is compulsory health insurance? We have been taught that there is a crisis in pneumonia about the ninth day, and in typhoid fever about the twenty-first day, but it is not a strange medical fact that in countries where they have compulsory health insurance most of the people get well on the seventh day? This is because there is no insurance money unless they are sick for at least a whole week. A certain number get well on the second or third day, a few on the fourth, but a very great many on the seventh and eighth. It is strange that this should have such an effect upon diseases in countries where there is compulsory health insurance. Let them explain away that fact.

A gentleman down in Washington who sits in a swivel chair, who has sat there for many years—I think it has a cushion on it—wrote a paper, in which he stated that malingering is a negligible quantity. It is a very scholarly paper, and, as the author is in government service, it is authentic (?) But do not believe all you hear from bureaucrats. Several years ago there were two rival medical schools in Chicago: Rush Medical College and the Chicago Medical School. The registrar of Rush Medical College was, one day, engaged in an argument with a student who wished to get back his registration money because he had decided to go to the other school. In the midst of the conversation, Prof. Gunn, who was the treasurer, walked in and said, "What does he want?" The registrar said, "He wants his money back. He has gone down to the Chicago Medical College, and

the only reason he can give for wanting to make the change is that they have cushions on their chairs." "Give it to him," Prof. Gunn said, "give it to him. If that's the direction they get their information from, we don't want him. We teach our students by the head route."

Mr. Lapp has told us also—I am pretty severe here, but don't think it is personal, I have the highest regard for both Mr. Andrews and Mr. Lapp—Mr. Lapp has said that in all Europe there has been no step backward, and that they like it. Why not? If you get that thing fastened on a country there *can* be no step backward. There are so many men in the employ of the state and they will keep blowing the horn so hard that you can't say a word about it! Lloyd George went over to Germany (he was so hard pressed that he had to have some scheme) and spent three whole weeks studying compulsory health insurance through an interpreter! He went to the heads of departments and asked, "How is the scheme working?" And of course they told him, "It is lovely, it is splendid, it is the Utopia on earth. I make forty marks out of it every time the doctor, who does the real work, is making twelve marks," this last as an aside. I did not do that. I went to Germany and I wore German clothes, and I wore a German mustache—it was not much of a mustache, but it answered—and I talked the German language. I spent many months there and I lived among the people and never slept a night in a hotel. I spent seven months in Vienna and never slept in a hotel. I spent several months in other places and spent my time among the people, and they did not know I was an American physician, and the common people, as well as the physicians, told me, to a man, that they did not like compulsory health insurance. I didn't let the eagle scream on every occasion. I'm proud of that eagle, he's a grand bird, but there's no use overdoing it! I went to Europe a good American and I came back a ten times better American. I went to Europe with six hundred years of ancestry behind me that hates paternalism, and I'll do everything I can to defeat paternalism in this great country of ours!

Mr. Lapp (in response to Dr. Ochsner):

Mr. Chairman, and Members of the Association:

I should like to answer that last proposition first, but think I shall take things in their exact order.

I am greatly chagrined and surprised to find that Dr. Ochsner is condemning a system which encourages people to come to the physician for care as quickly and as often as possible, and you can't have preventive medicine unless that thing is brought about. He condemns in Wisconsin the very thing that our belief in preventive medicine has urged—giving them the chance to come. I wonder if Dr. Ochsner has learned that the very thing that was adopted in Wisconsin, at which time the students paid \$6.00 apiece and got medical care during their time in the university, has now been adopted by many of the universities in the country? The system which he was condemning in Wisconsin is now pretty well adopted in all universi-

ties—California, Yale, Harvard, Princeton, and several others. If they haven't it this year, they are planning to get it right away. I think, as a layman, I would like the opportunity of going to a physician when I feel I need to, but I know I would not be likely to go to a physician until I really needed to do so. I am not an amateur reciting facts that somebody has told me. For two years I did nothing but think plans and study plans in Ohio, and throughout this country. I think I have examined every statement that has been made on the subject of health insurance in our language, and I believe I have studied every side of the question, and I have heard for years that you can't get people to come to the doctor under any circumstances. They will not come quickly enough, even if they have a chance. So, if there is any scheme under health insurance that will bring this about, I say it is a godsend that will bring them to the doctor when they are getting sick. It is nothing less than preventive medicine.

I am surprised that Dr. Ochsner should refer to the cost question. It is so simple. It is costing us that much now, and this is a plan for distributing the cost over all the people, and if it is too great for all the people, what does it mean to those few people who are hearing it now? In New York, each local group or local geographical group run their own affairs for themselves, just the same as scores and scores of plants are now doing. Up in Milwaukee, the light people have the same plan that is being enforced in health insurance, with a plan for paying these men and their families when they are sick, and it is working very successfully. They have no trouble with people running to the doctors before they are sick—not the slightest. I was told yesterday that the Tennessee mining people provide special care for their employes and that it was working successfully. They are not worried about people coming too often for medical care. I should think Dr. Ochsner's argument was the very thing I should advance if it will bring about the plan that he desires.

The Doctor referred also to the loss of time in Germany. I do not know where he got the idea that there was 10 per cent. before and 15 per cent. afterward because those facts are not true. The truth is that the sickness has been decreased but new diseases have been added to the list from time to time. When Dr. Ochsner was over there twenty-five years ago the scheme was in its infancy. They had not advanced the scale to agricultural workers. It was a minor thing, but since then the length of payments have been increased from thirteen to twenty weeks for each sick person and it has been extended to more and more groups of people. It has slightly increased the aggregate sickness but not the individual sickness. The average loss today is 8.6 per cent.; this instead of 15 per cent. as quoted by Dr. Ochsner. I want to get rid of this, it is one of the stock phrases. I do not ask you to take my word for it. Look the facts up and see who is correct. I know where I got my figures and what they are and you can find the

source of them. It is a matter of testimony. If you do not take Dr. Ochsner's you need not take mine, but look the matter up.

The Doctor is much concerned about malingering and about the "swivel chair" man in Washington. I don't know who it can be unless it is Mr. Frederick Hoffmann and you will probably admit that Mr. Hoffmann is not a swivel chair man. He is on the go all the time. He said last summer that this was all a myth, this idea of malingering. Mr. Meeker, who comes in contact with this as much as anybody, says it does not exist. If you will study Sir John Collie's book you will find that this is just a bugaboo that has been stirred up to frighten people. Collie said after his book was written that if he had it to do over again he would make it stronger, because he has found that many things he thought were malingering were not. Of two thousand cases that were sent to him as a consultant on malingering less than 25 per cent. actually were malingerers.

I did not understand what the Doctor said about getting well on the seventh day. We have lots of schemes for health insurance in this country; we do not have to look to Germany or anywhere else for the plan. We have many cash benefits, but we have no "seven day" sickness. There may be some cases where a man will by remaining sick another day get a full week's salary, and so remains off the list, but that is the fault of the organization. All the plans that are worked up properly have no problem in this regard at all.

Dr. Ochsner stated that you cannot get out of this scheme after you get into it. Perhaps they couldn't in Germany in the old days when the government controlled. Perhaps they can't yet. But I have never seen a plan under a democracy that you could not get rid of. I have never seen a plan that was working so rottenly as you say this is that you cannot get rid of. You have to prove that it is rotten, and its bad influences must be seen.

The Doctor also made some facetious remarks about Lloyd George going to Germany for three weeks. You know that in England the only opposition was by the doctors and they were not politically strong in Great Britain then, and they have since remarked that they were glad to get away from the old system. Students from Great Britain had been in Germany for years. Students from this country had been in Germany for years and there was scarcely one, even of the men who are now opposed to it—like Frankel, Hoffmann and others, but what came back here enthusiastic for the system. Hoffmann came back and said it was a good thing and everybody liked it. I am not quoting a proponent but a very bitter opponent.

Again, I do not know what the Doctor means by paternalism. If government is paternalism, if socialism is paternalism, I am for paternalism. There is no such thing as paternalism in a democracy. Paternalism is where the ruling class, like the Kaiser, is imposing things on other people but that does not

exist in a democracy and cannot exist. It is wrong to call a plan which is socially organized, a plan for all the people, paternalism. It is not paternalism, not in any sense or any way, and it is a confusion of thought to have it advanced as paternalism. We are never going to have health insurance in this country until the people approve it. They did not approve it in California and they have not got it. For the time being California has fought it down, for the people in this country will not have it until they approve it, and when they do approve it, it is a democratic action and not a paternalistic action.

THE LEGAL ASPECT OF BIRTH AND DEATH RECORDS AND THE DUTY OF THE PHYSICIAN TO HIS CLIENTS*

ROBERT J. FOLONIE, L.L.B.

CHICAGO

Commencing in 1538 birth registration was performed in England by the clergy to prevent disputes regarding inheritance. In continental countries such records until the past century have been kept in large part by the clergy, particularly satisfactory records being kept by the Catholic clergymen, in conjunction with their church records respecting baptismal records. The first systematic effort at keeping records in England was inaugurated in 1837 by the Registrar General's office and became compulsory in 1876. Compulsory registration laws have been enacted in most European countries during the 19th century.

In nearly all the States of the United States, compulsory birth registration laws exist, but adequate enforcement exists only in Pennsylvania, Michigan and New England. The United States Census Bureau prepared a model bill for registration of births in 1912 with a view to having the same uniformly adopted by the States. Impetus has been given to this subject matter by industrial developments of recent years. While the same has not crystalized into complete action even at this time, history will doubtless show that the urgent consideration of strict registration laws respecting birth and death, and genuine efforts respecting enforcement thereof, follow upon the general adoption of laws regulating employment of children and a growing sentiment respecting prevention of infant mortality.

It is a fact which should have been obvious long ago, that the state and community have a

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vital interest in prevention of infant mortality. The deaths consequent upon the great war made apparent the fact that not only a growing birth rate but preservation of the life of the child is indispensable to the continuance of the state. Industrial importance of birth records incident to employment of children received some set-back owing to the declaration of the invalidity of the Federal Act governing employment of children under specified ages. The state laws upon the subject are, however, constantly becoming more stringent. When it is borne in mind that the employer must know the age of the child at his peril; that if the child proves in fact to be under permitted age the employer is responsible for all injuries to the child and is not excused by the fact that he has been deceived respecting its age; the tendency to be careless or to accept the word or affidavit given respecting the age of the child will constantly become more irreconcilable with self interest. Self interest of the employer makes a birth certificate a *sine qua non* upon employment of children.

The lawfulness of a marriage is dependent upon the age of consent fixed by law and even more serious is the conviction for rape when the female is claimed to be under sixteen years of age. In such case consent to intercourse is no defense to the charge of rape when the female is under the age of consent. Proof of the exact age may therefore involve liberation or sentence to the penitentiary. Strictness in this regard may be looked for in the future. Titles to property, validity of the marriage relation, ability to secure employment and rights of inheritance are all involved in establishment of the date of birth.

The scramble for the property of a former president of the Standard Oil Company which was reported in the public newspapers recently is an excellent example of inefficiency of the past enforcement of the law in the particulars in question. Permit me to recall the facts briefly to mind. In this estate, running into the millions, the deceased died with no children or wife surviving him. No near relatives were known and officials and attorneys undertook a search for relatives which resulted in finding some second cousins. Claims have been made by putative child or children claimed to be his

illegitimate off-spring. Claims have been presented by some persons alleged to be imposters, by some who are recognized to be in relationship, and some whose status is in doubt.

The necessity of furnishing death certificates is assuming importance not as fully recognized as it should be. The filing of death certificates has been quite common in the cities where burial is not permitted until death certificate has been filed, but a like strictness does not exist in smaller towns and in the country. Until the year 1915, the registration laws of this State were haphazard and had a provision somewhat peculiar to the State of Illinois coaxing the physician to make reports by paying him 25c for the making of the report. In 1915 an entirely new act was passed which is much more comprehensive than any previously existing. It provides more effective machinery for registration and concentrates responsibility in administration of the act. The State Board of Health is given entire charge of registration of births, still births and deaths throughout the State. The State is divided into districts, each city, village and incorporated town is a separate registration district and outside of cities, villages and towns, township or road district as the case may be are made registration districts. The act contains provisions that the body of any person dying in the State or whose body shall be found in the State shall not be interred, disinterred, deposited in a vault or tomb, cremated, disposed of or removed, nor even temporarily held pending disposition for more than seventy-two hours without a permit of the local registrar or his deputy in the district. The registrar may act only upon a certificate as provided by the law. The local registrar is prohibited from requiring fees from the undertaker for the issuance of such permits. In case of still birth, the death certificate is required. If the child has passed the fifth month of uterogestation, the medical certificate must be signed by the attending physician or mid-wife if any was in attendance. Personal particulars must be authenticated by particulars and address of the informant who must be nearest of kin or other competent person acquainted with the fact. Particular attention is called to the fact that certificate of death or still birth in case of an illegitimate child shall not contain the name of

the father or reputed father or the name of the mother without their consent. Provision is made in the act for death certificates when no physician was in attendance. It is made the duty of the undertaker to present the certificate to the physician and when the death occurs in a hospital the person in charge of the hospital shall make the return from the hospital records.

Attention is particularly directed, respecting death records, to the following:

In every case where violence, casualty or abortion (whether induced or not) contributes to death, or where suspicion of undue means or criminality is involved, no death certificate should be signed but the case should be referred to the coroner. Self interest, as well as the provisions of the law dictate this course. If a miscarriage is not referred to the coroner, a strong inference is to be drawn that the attending physician had reasons for concealment of it.

Another matter of grave importance is:

Specially note the fact in the certificate if any accident contributes to the death. In giving the causes of death, the cause earliest in the chain of causation is the primary cause if later elements are dependent, and the later causes are the secondary causes. Thus, if a patient suffers a rupture, is operated on to correct it and, after the operation, dies from ether pneumonia, the rupture is the primary element to which the operation and pneumonia are secondary unless the rupture was traumatic, in which event you must go back one step further and take the trauma as the primary cause.

Respecting births, it is made the duty of the attending physician or midwife to file a certificate of birth in form prescribed by the State Board of Health with the local registrar in the district within ten days after the birth. The certificate of birth must contain at least the items of the standard certificate of birth approved and adopted by the United States Bureau of the Census except as to illegitimate children. Copies of the act are to be furnished a physician who registers together with rules and regulations as prepared by the State Board of Health for which no fee is required.

Physicians of this State are urged to register if they have not already done so, so that they may be fully informed as to changes and regu-

lations occurring from time to time. Records of birth made after the time limited by law must be accompanied by affidavits and an additional fee of 25c is exacted for filing this. For the first violation of any of the provisions of the act a penalty of \$5.00 to \$50.00 may be imposed and for each subsequent violation a penalty of from \$10.00 to \$100.00 or imprisonment in the county jail for not exceeding sixty days or both fine and imprisonment may be imposed.

The foregoing summary is necessarily only a superficial summary and does not purport to be a complete statement of the law. Complete copies of the law are available and can be secured from the local registrar and every physician should see that he is supplied with a copy and conform strictly to the requirements of the law. Entirely aside from the prospect of having penalties imposed for this violation, the interests of society demand compliance with it. The Federal government is interested and the United States Census Bureau has taken an active part in furthering such laws and their enforcement for various reasons. From the standpoint of the Federal government such action is imperatively necessary so that the government may be informed as to its man-power; whether the birth rate of the nation is increasing or decreasing and the causes for such increase or decrease; so that the age of its citizens may be known in the event that their rights to vote, their obligation to serve the country in time of war and kindred questions may be removed from the field of conjecture. The question is of vital importance to the body of the people because it enables the compilation of statistics from death records as to the causes of death, the prevalence of various forms of disease in different districts as bearing upon their correction and the elimination of unnecessary hazards to life. Such compliance permits general surveys of causes of infant mortality and adult mortality, titles to property and inheritance of estates and property rights in general are rendered more secure and not the subject of claims of fraudulent type involving inheritance rights. The law, if observed, operates as a shield to the employer finding it necessary or advisable to employ minors as there are stringent laws in this and other states prohibiting employment of children under certain ages at all, and

prohibiting employment of children under other specified ages except at certain employments. The law operates as a means of discovering the activities of abortionists. A general observance of this law by physicians permits a strict enforcement of the law against adherents of quack methods of treatment and others not belonging to the medical profession in that their failure to comply with provisions of the law can be whole-heartedly enforced whereas if the physicians neglect their duty the enforcement of the law must become lax as to medical attendants, or result in prosecution, also of medical men, thereby placing a burden upon the state officials making the administration of the law difficult if not impossible.

A very common viewpoint has existed in the profession for many years that observance by the profession of the registration act was a more or less optional proceeding which the physician might observe or not as his convenience permitted or his whim dictated. This lackadaisical course has reached the limit to which it may be permitted to run without serious menace to the community and the State.

It is to be noted that the title of this paper which was selected for me, and not by me, is inclusive of the duty of the physician to his clients. The term "client" is not one commonly used by physicians but is an exact term to define what is here in contemplation. In the case of a death certificate the duty is not to the deceased patient but is to the family. In the case of a birth the duty is not to the child and mother alone but is a duty, the violation of which may jeopardize the interest of the parents, and may also in the future affect the heirs of the child not at the time determinable. So complex are the social relations now existing in an organized society that it may be readily conceived that a physician by his neglect may prejudice the rights of persons yet unborn whose claims as heirs to the newly born child may be asserted fifty years hence and who, by neglect of the then forgotten physician may lose an inheritance which his caution would have safeguarded. When the child reaches the age of twelve or thirteen years it may suffer a loss of life or limb in a factory in which it would not have been employed had the physician at the

birth of the child properly performed his duty. In addition to injuring the child, a money loss may also result to the employer of the child in large amount. If some proper congressional act shall be passed as it probably will at some future time prohibiting the export from the State of commodities manufactured in part by minors under specified age, a substantial part of the commerce of the State may find itself under embargo and perhaps unjustly so through the laxity of the medical profession in not making it possible to determine with certainty the age of children employed in an industry.

It will not do for the physician to deceive himself that he may neglect his duties in strictly complying with the provisions of the laws in question, on the theory that it is more or less of a formality. The physician is a component and an essential part of society and must perform his duties to the remainder of society if he desires to be protected in the reciprocal rights to which he believes himself entitled. From a purely selfish professional standpoint his observance of the law will prove of great benefit to his profession in permitting the gathering and preparation of statistical information respecting birth rate and mortality. Statistics respecting the number of deaths in a given district from certain causes, for example infant mortality of a given type, have comparatively little value when the birth record in that same district is not available. These statistics have been more or less a matter of guess work because incomplete, and by rendering them complete and dependable another link is forged in the chain of experience to which the physician may resort to pull humanity out of the slough of disease. I urge not only upon the individual members of the society that they make it a personal rule of conduct so comply with the provisions of the law respecting reports but also that the State society urge upon its membership an immediate, strict and uniform compliance with the law and that after giving proper warning and information to its membership, it set aside a fund to assist in prosecuting members of the profession who neglect or refuse to comply with their duties. By such measures only may it be so firmly impressed upon the profession that the present apathy on the subject shall be completely and permanently eradicated.

PLANS FOR THE DEVELOPMENT OF MORE EFFICIENT HEALTH ORGAN- IZATION FOR THE CITIES AND RURAL SECTIONS OF ILLINOIS*

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One of the most interesting and spectacular things in the entire history of medicine has been the development of popular sentiment in regard to the protection of the public health during the past few years. The revelations of the exemption boards as to prevalent, preventable, physical disability and the experiences in camps and cantonments in the creation of the American Army, taught a salutary and impressive lesson, and this lesson was driven home with tremendous force by the recent epidemics of influenza. The people, deeply interested in our successful engagement in the world war, were impressed not only by the presence of physical deficiency which might have been avoided by more serious consideration of preventive medicine in years past; but they were likewise impressed by the success attained in the prevention of those communicable diseases which played havoc with our Army during the Spanish-American war. To the average citizen, the war gave health conservation a new significance, but in a rather general way.

The terrifying epidemic of influenza, however,—especially that of the winter of 1918-1919,—when local health departments crumpled up and the nation was in a state of panic,—brought the subject of public health home to all of the people with a new and personal meaning. These experiences awakened the public to the acute need of the readjustment and revision of our public health laws and administration, especially in our towns and communities. It awakened them to the truth—that the primitive, half-organized, half-manned, and half-financed health departments of our average towns and cities, are not prepared to intelligently or efficiently meet a great public calamity or even to conserve the health interests of the people in ordinary times. They have come to recognize that the part-time health officer, compelled to rely upon his private practice for his livelihood, cannot be depended upon in times of epidemic, when the demands of

his private practice are the greatest. In a very definite way, the public have come to realize the truth of that statement so frequently repeated, "that community health and individual health are purchasable commodities, and that the community can have just as much or just as little health as it is willing to pay for."

For the most part, the larger cities of Illinois are provided with full-time medical health officers and reasonably efficient health organizations. There are exceptions, of course, to this rule. There are still populous cities in the State whose health organizations are primitive in the extreme. In the smaller cities and rural districts, almost without exception, there is nothing to be found which even approximates relatively efficient health service. There is a tremendous need in Illinois at the present time for health organizations to protect the rural sections, and to a greater extent than ever before the people are prepared to seriously consider their health problems. It is now full time for the drafting of a modern, comprehensive public health law in Illinois. The people realize their need for better protection and, in this day of disturbed public mind, it is the part of wisdom for the medical profession to do all in its power to see that this protection is provided. In this way, as I see it, there will be the greatest assurance against the enactment of laws providing compulsory health insurance and other radical legislation.

A system of local health administration, which is now imperatively needed in Illinois, should be founded on scientific principles, with local departments organized on a basis of efficiency and economy, manned by a staff of trained workers imbued with the spirit of public service, backed by adequate public health laws and ordinances, fully recognizing the principle of individual liberty, but permitting no man to offend against the health of his neighbor, and should be so financed that every dollar would go for effective service and so that no work of real importance would be left undone. Such local health organizations should be encouraged to develop to the utmost their individuality, initiative and independence, with the attitude of the State Department of Public Health remaining as one of helpfulness, rather than direction,—and of stimulation and support, rather than dictation.

At the present time, owing to the total absence

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of preparedness of local health organizations, it becomes necessary at times for the State Department of Public Health to assume authority in local communities which the Department does not desire to assume. The establishment of well equipped and efficient local health organizations will go far toward rendering such interference wholly unnecessary and, consequently, the development of such organizations is an important step,—not toward centralization, but emphatically toward decentralization of authority.

With the local health machinery generally throughout Illinois, antiquated and grossly inadequate; with separate health jurisdictions being manned chiefly by laymen, having no knowledge of preventive medicine, public health or sanitation, and with the average compensation of such health officers, when compensated at all,—being less than \$60.00 per annum,—it is not to be wondered at that communicable diseases thrive, imposing an economic loss of about \$225,000,000 annually upon the people of the State.

In view of this obvious inefficiency in local health administration and the emphatic demand for a higher degree of health protection, it is clear that we must appeal to the next General Assembly for some adequate remedy and relief. The appeal must be backed by the people and supported by the medical profession, and to secure this support our plan must be reasonable, fair and practicable. Due regard must be shown for individual and community rights and so far as practicable the solution of local problems must be left to local communities.

At the present time there are 2,710 separate health jurisdictions in the State,—cities, villages, counties and townships,—a large majority of them so small and so sparsely populated, as to be unable to afford any sort of efficient health organization. We must do away with this large number of health jurisdictions, and in their place erect a proper number of public health districts which can afford competent personnel and reasonable equipment. As I see it, the 2,700 health jurisdictions should be reduced in number to 131, 29 of these being cities of more than 15,000 population, and 102 counties outside of these larger cities, each of which should have its well organized health department. Of this smaller number of health jurisdictions, there is

none which cannot well afford a full-time, thoroughly qualified, medical health officer, with laboratory and other equipment and with a reasonable number of well trained assistants.

It is unnecessary to say that the entire personnel of these districts, if it is to be efficient, must be selected solely on the basis of qualifications for the work, with appointments made, not for short terms of years, but for indefinite periods, dependent upon efficient service.

In the selection of this skilled personnel, at least in the selection of the medical health officers, the State Department of Public Health should be required to co-operate with the county and municipal authorities, but where the local ordinances and their administration are such as to assure compliance with the spirit of a modern State Public Health Act, there should be the minimum of interference with local authorities in the selection of personnel, or in the appointment or dismissal of employes.

The substitution of these 131 full-time medical health officers,—medical men giving their time to public health service and in no wise engaging in private practice,—for the army of part-time medical health officers now employed, will mean vastly better public health service for the people, the complete eradication of the ever-present annoyance experienced by medical practitioners and the suspicion of unfair practice on the part of health officers who are also engaged in the private practice of their profession.

It may very properly be argued that we will experience difficulty in securing a sufficient number of thoroughly competent medical men to serve as local health officers. It is no longer a question for discussion, but an established fact that the physician, however competent in his professional work, is not necessarily qualified for the administrative direction of a public health organization.

Recognizing this difficulty, we must so formulate the proposed State Public Health Act, as to meet it in the best possible way. Temporary appointments, utilizing the best available material, or the continuation of the existing local health organizations on a more efficient basis until properly qualified personnel is available, may be provided for; but every safeguard must be thrown around this provision in order that it may not result in the perpetuation of unqualified men or inefficient organizations whereby the sani-

tary ends and purposes of the law will, of course, be lost.

We must immediately proceed to do two things: First, to provide schools for the training of medical practitioners in preventive medicine and public health; second, to establish such courses of training in our medical colleges as will qualify and encourage young men to enter the field of public health.

There has long been the complaint that the medical profession is over-crowded; at the present time, the field of preventive medicine is lamentably undermanned.

The first provision,—the establishment of public health schools for practicing physicians,—will enable medical men now engaged in private practice, to qualify through a short course of public health training, for entrance in medical health work, while the second will not only qualify students to enter fields of preventive medicine upon their graduation, but will tend to develop a better appreciation of, and sympathy with, public health work on the part of the general medical profession.

Plans are now being formulated for the encouragement of a special course of instruction in one of the leading medical schools of Illinois and a school for training of health officers,—a short intensive course of training,—is about to be established near the city of Chicago.

In the short time allotted to me for the discussion of plans of the State Department of Public Health for the development of a more efficient health service in our cities and rural sections, I cannot do more than treat the subject in a very general way, but it is hoped that this brief presentation brings to your minds the thoughts: First, that the present system of organization is antiquated, thoroughly inadequate, wasteful of health and life, and must be changed; second, that the plans for reorganization are reasonable, practicable and fair and therefore are entitled to the support both of the people and of the medical profession.

I should like to add in closing, that the State Department of Public Health will be glad to have suggestions from members of the Illinois Medical Society on the plans and details of reorganization of our public health system, and it would be very helpful to the Department if the Society would appoint a special committee to confer on this matter.

DISCUSSION

(ABSTRACT)

Dr. H. N. Heflin (Kewanee): It is my opinion that county medical officers, full paid, in the sparsely settled communities, is the solution of the question.

In the outlying districts around our cities we find scarlet fever, smallpox, diphtheria, chicken-pox and all the contagious diseases raging because the supervisor is a good fellow and he doesn't want to shut up his friends and cause them a lot of trouble. He is a good fellow and the result is we have scarlet fever around Kewanee right now. My jurisdiction doesn't go out there, but sometimes I go out there and put cards up and call the supervisor's attention to his work.

I think also that public health officers throughout the state should be a little closer in line with the state authorities and that there should be harmonious administration of health work in our state; that there should be a school and that school should be in close touch with our state department of health.

Dr. J. W. Vanderslice (Oak Park): I am not a health officer, but the health officer may not see the key-note in what has been read. We have a condition and not a theory that is confronting us. We have a very definite propaganda of a very active, energetic, influential body of reformers which includes certain members of the medical profession. They have a very definite idea of state medicine and Dr. Drake comes before the Illinois State Medical Society with the antithesis of their socialization schemes. I certainly feel that the physicians of Illinois owe a debt of gratitude to Dr. Drake that he, as one of the prominent health officers of this country, is willing to take a position in which he recognizes the medical profession in their rights in regard to the administration of preventive medicine in this state.

Now, Dr. Drake pointed out, and yet some of you may have missed it, that we are facing legislation. Dr. Drake magnanimously comes before us and says, "Gentlemen, come in and guide this legislation." Now, he didn't say that, but reading between the lines we certainly can interpret what he said to mean, "Come in and help guide this."

I feel that this organization owes to Dr. Drake a vote of confidence, and I move you, Madam Chairman, that this section go on record in giving Dr. Drake a vote of confidence and that we recommend to the House of Delegates that they elect a Committee on Public Health Administration, or whatever name they may feel best covers this ground.

Dr. H. N. Heflin, of Kewanee, seconded the motion.

Dr. Rachele E. Yarros (Chicago): I want to say that this is one of the most significant acts of the Illinois State Medical Society.

There is no use setting aside a certain amount of money unless the physicians of Illinois are interested in the State Department of Health and unless they are going to guide and co-operate with it.

If you don't like a certain thing, put yourself on

record. If you like it, then co-operate and in that way you will have value received for the money invested in the part of the work that you are entrusting the Public Health Department to do.

The Chairman: Are there any further remarks on this motion?

It was voted, on motion by Dr. VanDerslice, duly seconded by Dr. Heflin, that Dr. Drake be given a vote of confidence and that it be recommended to the House of Delegates that they elect a Committee on Public Health Administration, or whatever name they may feel best covers that ground.

Dr. C. St. Clair Drake (closing discussion): I can say to Mr. President and members of this section that I very deeply appreciate your expression of confidence, and there is nothing that has happened in the past year that is more pleasing to me than to see the profession adopt an attitude of co-operation with the constituted health authorities.

I assure you that the State Department of Public Health has at all times had as its first principle and policy that of co-operation with the medical profession. We recognize that we cannot, under any circumstances, make any headway in public health administration unless we do have that co-operation. I think that with your co-operating committee we will get a long way toward a better understanding between the constituted health authorities. The profession and the public will thereby profit.

Dr. VanDerslice has pointed out that there are imminent dangers respecting radical legislation. There is no doubt in my mind that legislation will be introduced at the next session of the General Assembly providing for radical health insurance—I mean compulsory health insurance of the most radical kind. We must be prepared to combat that radical legislation. The best argument, as I see it, against that kind of legislation will be that we have introduced, are pushing and about to pass, legislation that will create a thoroughly efficient health administration in every quarter of the state.

Dr. Heflin, who is one of our very useful health officers in Illinois, rendered very good service in the city from which he comes—Kewanee. He has pointed out the need of a health officers' school. He was referring chiefly to a school for the training of health officers.

I have in mind in addition to that another type of training for local health officers, that is, an annual session of health officers, say at the state capital in close contact with the State Department of Public Health, of about a week's duration where we can discuss all the problems that confront the average local health officer, and give him some intensive training in public health work during that period of time. We have arranged for a school of that kind to be held during the latter part of next September, and we expect a very large attendance of health officers.

I wish again to express my appreciation of the action of this section on the resolution adopted.

INTERPRETING THE FINDINGS IN A HEART CASE*

C. T. HOOD, M. D.

CHICAGO

The old method of diagnosing and treating a heart case, based upon a murmur or murmurs found, is slowly but surely giving place to the much more satisfactory method of the study of the efficiency of the heart muscle. There are several good reasons for this. First, many individuals have been watched for years, who had murmurs, yet the heart continued to maintain a normal circulation. Second, many people have died of heart failure, where no murmurs had been found. Third, and most important, it is the heart muscle that maintains the circulation. Fourth, in interpreting the findings in a heart case, it is not the presence of the murmur or murmurs, nor how much hypertrophy is present, but the important fact to determine is, how well is the heart maintaining a normal circulation.

The heart muscle may be hampered by more or less changes in its structure, or by greater demands made upon it, by reason of valvular defects or hypertension. Yet, hampered as it may be by such conditions it may still be able to maintain a normal circulation for many years or even to the end of the life of the individual, so it becomes apparent that heart failure is the most important factor to consider in the study of a heart case, and he who is the best able to interpret the findings of his heart cases, that point to heart failure, will diagnose and treat his heart cases the most satisfactorily.

There are many things to be considered, in judging the condition of a heart muscle, and in estimating whether, first, it is apt to fail in its work; second, whether after it has to an extent failed, it will come back and how much; and, third, is its work practically done and why?

We do not believe that these facts can be determined by simply a study of the murmur or murmurs present, or estimating the amount of hypertrophy in the case.

Someone has said that classification is the scientific basis for all study. Up to a very few years ago, organic heart diseases were classified by the murmur or murmurs found, but this classification can not be substantiated by post-mortem findings. Therefore, we believe that a classifica-

*Read before the Stockyard Branch, Chicago Medical Society, Nov. 13, 1919.

tion of organic heart diseases, based upon the etiology and pathology, is absolutely necessary for a proper estimation of the condition of the heart muscle.

Leaving out congenital heart diseases, which are rare, and the goiter heart, and while we know that we are laying ourselves open to severe criticism by so doing, and cannot at this time stop to discuss the condition, yet, we believe that time and a thorough study of the changes in metabolism will prove that the so-called "Soldier's heart" or neurasthenic heart belongs to the goiter class.

With these two exceptions, the congenital heart and the goiter heart, we have four types of organic diseases of the heart.

First, the so-called rheumatic heart, or that type of organic heart disease which results from an acute endocarditis with or without more or less myocarditis and possibly pericarditis. This type of cases accompanies or follows tonsillitis, rheumatism, scarlet fever, diphtheria, measles, puerperal fever, and focal infections of any kind. In fact, that type of acute infectious conditions that we know now to be due to some one of the types of streptococci. The endocarditis, as a rule, attacks the mitral valve first. The valve flaps are roughened or adhered together, the chordae tendineae are shortened, the papillary muscles become stiffened and lose, to a greater or less extent, their contractility. The valve flaps, hampered by these pathological changes, fail to properly close the mitral opening, and a mitral regurgitation results. At the same time that they fail to properly close the mitral opening, they fail to properly open it, or they may, at first, fail to properly close the opening, but as soon as contractions have occurred that must result from the pathological changes present, the valve flaps fail to properly open the mitral opening, and as a result, a mitral stenosis and a mitral regurgitation exists, and these valvular changes will exist as long as the individual lives. If the aortic valve is implicated in the infection, the same results follow, namely, both an aortic stenosis and an aortic regurgitation. If a normal circulation is to be maintained, when such valvular defects occur, hypertrophy of the heart muscle must take place, and the amount of hypertrophy present will depend upon, first, the extent of the valvular defect; second, the kind of work the individual performs; in other words, if the indi-

vidual leads a sedentary life, much less hypertrophy will be required than if he leads an active life, necessitating greater variations in the circulation.

If the valves alone are involved in the original infection, no other changes than these mentioned will be found, but if the myocardium becomes involved, then there will result destruction of a greater or less number of muscular bundles of fibers of the heart muscle, and their replacement by fibrous tissue, and each bundle of heart fibers or portion of a bundle thus involved and replaced by fibrous tissue, means a reduction of the working power of the heart muscle.

If the pericardium is involved in the infective process, and a fibrous pericarditis results with more or less adhesions between the pericardial covering of the heart and the lining of the pericardium, a further impediment is put upon the heart muscle, necessitating still greater hypertrophy, in order that the heart may maintain a normal circulation.

From these facts, it becomes evident that the first and most important thing in interpreting the findings in a heart case is a careful history.

The second type of organic heart disease is the kidney heart.

Not infrequently, in the first type mentioned, the same infection that attacks the heart will also attack the kidney, and we have grafted upon the streptococcus heart a kidney heart, but should the kidney escape infection in the primary process, it may become infected later, or the infection may attack the kidney alone.

Time will not permit us to discuss the kidney phase of the subject, but we believe that the true kidney heart is always the result of an infection, most often a streptococcus infection, but it may be a puerperal or a pneumococcus infection, and that it is the glomeruli of the kidney that are involved. The urine is, as a rule, scanty, but not to the same extent as when the tubules of the kidney are involved. It contains casts of all kinds, especially epithelial casts, with some white and some red blood cells and albumin in varying amounts. Should such a condition exist for from one to three weeks, the left ventricle begins to hypertrophy, because the increased resistance in the capillaries of the Malpighian tufts necessitates an increase in the systolic blood pressure, and this required an increase in the pumping power of the left ventricle; therefore, the hyper-

trophy. If the individual survives the acute kidney attack, and the case becomes a subacute or chronic one, then the urine, in addition, will contain fat globules or fatty casts, the gravity will be lessened, and will soon become a fixed gravity at a comparatively low point. Anasarca is rare and no heart murmurs are heard. As time goes on, and the secondary changes in the kidney become more extensive, a still greater increase in the systolic blood-pressure is required, greater than the left ventricle can maintain, if the arteries remain at a normal caliber. As a result, fibrosis of the arterial walls occurs, and both the systolic and the diastolic pressure are increased. So long as the left ventricle is able to maintain a normal circulation, with the assistance of the contracted arteries, without dilatation, no heart murmurs will be found, but when the left ventricle must hypertrophy to such an extent, or its walls stretch, as a result of increased strain put upon them, or poor nutrition, and the mitral opening is stretched, a mitral systolic murmur is heard.

The third type of organic heart disease is the so-called senile, or the arteriosclerotic heart.

Much misconception exists regarding the arteriosclerotic heart. This type of heart disease is the result of arterial fibrosis with or without kidney involvement, and in rare cases of calcareous changes in the arterial walls. It is first a hypertrophy of the left ventricle, and so long as the left ventricle can maintain a normal circulation without dilating the mitral ring, no murmurs are heard, except it be a systolic murmur at the base, the result of a roughened aortic arch, but as soon as the left ventricle dilates, either from increased strain put upon it in maintaining a normal circulation, or from nutritional changes, due to improper nourishment that results from changes in the coronary arteries, the mitral ring is stretched, and a mitral systolic murmur results. In this class of cases, a high systolic pressure has existed for years or so long as the left ventricle has been able to maintain a normal circulation, working against an increased resistance, and often for some time, the high systolic and diastolic pressure is maintained after the mitral ring has been stretched. This will be true if the right ventricle hypertrophies, and lends its help to the left ventricle, in maintaining a normal circulation, but if the right ventricle does not become hypertrophied, which

often happens because the coronary arteries are to such an extent involved as to prohibit extensive hypertrophy of the right ventricle, under these conditions, the systolic pressure falls to a considerable degree, but the diastolic pressure, while it may fall, does so to a limited extent. The gravity of the urine becomes fixed at a low point. It contains albumin and casts in varying amounts, with a low urea and chloride output. Death results from heart failure.

The fourth type of organic diseases of the heart is the syphilitic heart.

We feel sure that more mistakes are made in the diagnosis and management in this type of organic heart disease than in any of the various types. If one remembers that syphilitic aortitis, as a rule, occurs from fifteen to seventeen years after the primary infection, that it may once in a great while occur in from ten to twelve years, and get a history of a primary infection, if it can be obtained, the probability of a syphilitic aortitis will at once be considered. In syphilitic aortitis, the syphilitic condition affects the ascending portion of the aorta, gradually dilating the aortic arch, and retracting the aortic valve cups, so that the aortic cups do not properly close the aortic opening, permitting the blood to regurgitate back into the left ventricle, which results in hypertrophy of the left ventricle, and often dilatation, which causes a stretching of the mitral ring, and a relative mitral leak. The fact that the aortic cups are retracted prevents the proper filling of the coronary arteries, and angina is often present, with, sooner or later, nutritional changes in the heart muscle.

With these facts in mind, let us see how we can interpret the findings in a heart case.

First, we must remember that the heart has two forces; one, a low-powered force that maintains a normal circulation when the body is at rest. This low-powered force of the heart is not capable of much variation. Second, the heart possesses a reserve or high-powered force that is capable of much variation, and is used when the body is in action.

Among the most important heart findings are:

First, anasarca, which may be only a slight swelling of the feet, ankles, or legs, or may involve the entire legs, with or without ascites and edema of the face and hands, with pleuritic or pericardial effusion.

Second, dyspnea, which may occur only upon

ascending an incline, or may occur only on more than the ordinary effort, or may come on slight effort, or it may result in:

Third, orthopnea, an inability to lie down.

Fourth, a decrease in the urinary output.

Fifth, cough, with or without signs of pulmonary congestion.

Sixth, pain, referred to the precordia, arm, or abdomen, and, as a rule, occurs after some kind of exertion, but may occur while the individual is asleep.

Seventh, pulse changes.

Eighth, cyanosis.

Ninth, exhaustion upon exertion. (In true aortic lesions, anasarca is not common, but exhaustion is often pronounced.)

Tenth, insomnia, which may be due to venous congestion that occurs often in mitral lesions, cerebral anemia which is often found in aortic lesions, and it may be due to improper oxygenation of the blood.

Eleventh, signs of hypertrophy.

Twelfth, heart murmurs.

In discussing the value of anasarca, as evidence of failure of the heart muscle, one must have a good history of the case, with the urinary findings.

If the patient is in the first two decades of life, the history of a possible streptococcus infection, or puerperal, or pneumococcus infection, is important.

Second, in interpreting the value of anasarca as a symptom in individuals past twenty or twenty-five, not only should we have a history with a possible source of infection, and the urinary findings, but we should have a record of the blood pressure as well. If the blood pressure is normal for the age, and the urinary findings are, scanty urine, with granular, hyaline and epithelial casts, and large amounts of albumin, the anasarca is of kidney origin, but if the urine contains red and white blood cells, and some fat or fatty casts, with a tendency to a fixed gravity, then the systolic pressure will be either slightly or markedly increased, then the heart condition present is secondary to the kidney, and any murmur found will be due to hypertrophy and dilatation of the heart muscle, stretching the mitral opening. If the history elucidates the fact that the anasarca has extended over years or months, and has been of a gradual increase, and the patient is from thirty-five to seventy, the urinary

findings will be more or less albumin, a fair amount of urine, or even an increase in the amount, with the night urine equal or exceeding the day urine, hyaline and granular casts, with a low fixed gravity. The systolic and diastolic blood pressure will be markedly increased, or the systolic pressure considerably increased, but the diastolic markedly increased; in other words, the condition is one of arteriosclerotic change, and the heart findings are secondary to the increased blood pressure, or arterial fibrosis, or possibly atheroma. If the urinary findings are albumin in various amounts, casts of all kinds, with waxy casts, or only waxy casts, with little or no increase in the blood-pressure, and the patient is from forty to fifty-five, it is strong evidence of a syphilitic aortitis, especially, if a history of primary infection can be obtained.

Dyspnea. When one recalls the mechanism of respiration, and remembers that respiration is the result of carbon dioxide in excess in the blood stream, the presence of dyspnea in a heart case points to improper oxygenation of the blood in the pulmonary alveoli. Therefore, when dyspnea is present in a heart case with no fluid in the chest, we are able to say that the left ventricle may be hypertrophied, the systolic blood pressure increased either from kidney or arterial disease, the aortic valves diseased either from streptococcus infection or syphilitic infection, but so long as the mitral ring remains normal, or in other words, so long as the hypertrophy of the left ventricle does not stretch the mitral opening, either from overwork or from nutritional changes, dyspnea will not occur.

From these facts, we are able to judge at once that unless the right ventricle is diseased, independently of the left ventricle, dyspnea means, first, mitral disease due to streptococcus changes in the valves, resulting in mitral regurgitation and mitral stenosis. In these cases, the right ventricle has been compelled to hypertrophy, and the presence of dyspnea points to impaired function of the right ventricle, which is due to dilatation or nutritional changes resulting in dilatation. The mitral disease may also be due to myocardial changes from the streptococcus infection resulting in a general weakening of the myocardium, or dyspnea points to the fact that the mitral ring has been stretched or is being stretched from hypertrophy, with or without dilatation.

Orthopnea means dilatation of the heart muscle, with or without hypertrophy, except in rare cases, where a fibrinous pericarditis exists, when the history will help out in the diagnosis.

A decrease in the urinary output seldom occurs without anasarca and dyspnea. If it does, it is due to a passive congestion, the result of a failing heart muscle.

Cough, with signs of pulmonary congestion, as moist rales of a non-constant character, means heart failure from hypertrophy and dilatation, or from myocardial weakness, resulting from a general myocardial infection, as malignant myocarditis, or myocardial weakness from nutritional changes, as in arteriosclerosis or syphilitic aortitis. Cough may be the result of pressure of an aneurysmal sac upon the recurrent laryngeal nerve. Cough may also result from a badly dilated left auricle, in extensive mitral stenosis.

Pulse changes. The pulse alone is a poor guide to the gravity of a heart case. A small pulse means either a badly diseased myocardium, or an extensive mitral disease. In either case, there will be other findings of more importance. A collapsible pulse, the Corrigan pulse, points to aortic regurgitation. This may mean streptococcus involvement of the aortic valves, or syphilitic aortitis.

Dropped beats, or premature contractions are common in the arteriosclerotic heart, and not uncommon in the streptococcus heart, but in the streptococcus heart, dropped beats are often the forerunner of an absolute arrhythmia or auricular fibrillation. Auricular fibrillation or absolute arrhythmia is most often due to streptococcus changes in the heart, or to nutritional changes in the bundle of His, and sometimes to conditions that we can not interpret.

Heart block, either partial or complete, is most often the result of syphilitic changes in the bundle of His. Once in a while, heart block will result from a streptococcus infection of the bundle of His.

Cyanosis may be due to extensive mitral stenosis, or to myocardial weakness from any general anemic state; or from true heart failure, which may result from any of the pathological changes described.

Hypertrophy. If one is an expert at percussion, he can outline the cardiac dullness, but so many things alter the percussion note that unless one is an expert at percussion he had better trust

to the position of the apex or the x-ray, in estimating the extent of the hypertrophy present. If the apex is in the sixth or seventh space, or under the seventh rib, and to the right of the nipple line, it is the left ventricle that is hypertrophied, and especially is this true, if in the left lateral prone position the apex shifts further to the left. If the apex be down and well outside, to the left of the nipple line, the entire heart is hypertrophied. If it is well to the left of the nipple line, but not down, it is the right ventricle that is enlarged. The percussion note, however, is of value in estimating the width of the aortic arch, but even here the x-ray is better evidence.

Pain that occurs with organic heart disease results, so far as we know, from but two causes. First, partial or complete occlusion of the coronary arteries. Second, stretching of the elastic coats of the aorta. A careful history will elucidate the fact that the pain is the result of some form of exertion. Even at night the pain is probably due to some extra strain put upon the heart while asleep. Too much stress cannot be put upon the importance of obtaining a good history of when and how the pain occurred.

Exhaustion. When marked exhaustion follows exertion, it points to, first, myocardial changes, as in arteriosclerotic heart, or extensive syphilitic aortitis, or nutritional changes that may result from both of these causes, or it may be found in the streptococcus heart.

Murmurs. As you all know, cardiac murmurs are divided into systolic, presystolic and diastolic. Systolic murmurs may be mitral, tricuspid, aortic, or pulmonary. Tricuspid and pulmonary systolic murmurs are scarcely to be considered, for when a pulmonary systolic murmur occurs, it is safe to say that it is a congenital murmur, and when a systolic tricuspid murmur occurs, it is either congenital, or it makes no difference in the case whether its presence is known or not. A systolic murmur at the base of the heart is either an aortic stenosis, or a roughened arch, from arteriosclerotic changes, or a roughened arch from syphilitic changes, a syphilitic aortitis. Occasionally, a pulmonic systolic murmur is heard at the base. It is congenital. If a systolic murmur at the base is present in an individual between seven and twenty-five, it is safe to say that it is due to a streptococcus infection, and will be accompanied, at least ninety times out of one hundred, by a diastolic murmur. If a systolic

murmur occurs at the base between thirty-five and fifty-five, or even between fifty and seventy, accompanied by a diastolic murmur, it is due to a syphilitic aortitis. If a systolic murmur occurs between thirty-five and eighty, without a diastolic murmur, it is due to a roughened arch from arteriosclerosis. In a systolic murmur due to streptococcus infection, as a rule, a systolic thrill is felt over the base. Mitral systolic murmurs are due to actual disease of the mitral valve flaps, chordae tendineae, or papillary muscles, the result of a streptococcus infection, and second to stretching of the mitral ring from hypertrophy and dilatation of the left ventricle or the so-called relative murmur. To determine the value of a mitral systolic murmur, one must have a careful history of the case, with the urinary findings, blood-pressure record, and if the individual is from thirty-five to fifty-five, a Wassermann. If the history gives a possible source for a streptococcus infection, then the mitral regurgitation will be accompanied by a mitral stenosis, with the findings of a mitral regurgitation, plus a mitral stenosis. If the history does not point to a streptococcus infection, and the individual is under thirty or thirty-five, there will be a history of a kidney involvement, and signs of hypertrophy of the left ventricle. If the case is between thirty-five and fifty-five with no kidney history or arteriosclerosis, there will be an aortic diastolic murmur, due to syphilitic aortitis. If the case is between thirty-five and eighty, with a history of high blood-pressure which is still present to a considerable degree, the mitral systolic murmur is due to a stretching of the mitral ring.

There is a class of cases, where mitral systolic murmurs are found, in which no other findings pointing to organic diseases of the heart can be demonstrated, the so-called functional murmurs. These mitral systolic murmurs, we believe, are probably due to three factors. First, a general weakened condition of the myocardium, from anemia, as in pernicious anemia, or as accompanies and follows febrile states, as typhoid, pneumonia, etc. Here the mitral ring is stretched sufficiently to permit of the formation of a systolic murmur, and, second, when from some cause, the muscular action of the valve flaps, the chordae tendineae, or the papillary muscles is imperfect, allowing the valves to leak. Again, in children, the muscular development of the heart sometimes does not keep pace with the

body development and with the requirements of the heart. After a few years, such mitral systolic murmurs disappear.

Presystolic murmurs occur only at the mitral. They are often accompanied by a plesystolic thrill. A presystolic murmur means but one thing, namely, a mitral stenosis, which points conclusively to a streptococcus infection.

Diastolic murmurs. Aortic diastolic murmurs may mean one of two things. First, the result of a streptococcus involvement of the aortic cups, and, second, a syphilitic aortitis. It can safely be said that diastolic murmurs never occur except from these two causes. It may be possible for an arteriosclerotic condition of the arch to so dilate the aortic arch, as to permit a diastolic murmur, but we have never seen such a condition. There is, however, an extra cardiac condition that may give rise to diastolic murmurs, namely, pericarditis. Such a possibility is to be remembered in the occurrence of a streptococcus inflammation in the endocardium, myocardium, and possibly the pericardium. Another murmur is sometimes spoken of, namely, the late diastolic murmur at the apex, or the Austin Flint murmur. It has no special significance.

With these facts in mind, how are we to judge the condition of the heart muscle, and upon what can we base the prognosis?

After all the facts have been carefully gathered up, and a diagnosis made, as to the type of heart present, whether it be a streptococcus heart, a kidney heart, an arteriosclerotic heart, or a syphilitic heart, then the question is, what is the condition of the heart muscle?

If the case be one of a streptococcus heart with mitral involvement only, where we have a mitral regurgitation and a mitral stenosis to deal with, which means that while the entire heart may be enlarged to some extent, it is the right ventricle that must hypertrophy, to meet the increased demand made upon it; if no anasarca is present, and dyspnea does not occur upon the performance of the ordinary duties of the individual, we may say that the myocardium is in good shape, and that if a myocarditis has existed, but little damage has been done to the heart structure. If such a patient is under fifteen years of age, care must be exercised in the prognosis, because secondary changes may occur that would interfere with the heart muscle. If such a person is between twenty and twenty-five, a better prognosis can be made.

If the case is a streptococcus heart, and no anasarca is present, but some dyspnea and cyanosis occur upon only a fair amount of exertion of the individual, we may conclude that while the myocardium is doing its work fairly well, considerable damage has been done to it, and it may at any time dilate to some extent. If anasarca is present, with dyspnea upon exertion, the myocardium is badly involved, and if dilatation has not occurred, it may do so at any time. If anasarca is present, with marked dyspnea, and orthopnea, to a greater or less extent, is present, the myocardium is not only badly involved, but the entire heart is dilated, and while the heart muscle may again regain some of its tonicity, its real working days are over, and the prognosis is exceedingly grave. It is always to be remembered, in the streptococcus heart with mitral stenosis and mitral regurgitation, the possibility of a left auricular thrombus that may without a moment's notice loosen, and completely block the mitral opening, causing instant death.

If, in a streptococcus heart, the aortic and mitral are both involved, the entire heart will be hypertrophied. If no anasarca or dyspnea be present, even upon considerable exertion, we may conclude that the myocardium is not to any great extent involved, but if anasarca and dyspnea, and if dyspnea with exhaustion without marked anasarca be present, the myocardium is badly involved, and dilatation may occur at any time.

If, in a streptococcus heart, the aortic valve alone is involved, anasarca and dyspnea are not common, so long as the left ventricle does not dilate and cause a relative mitral leak.

In these purely aortic cases, weakness is marked after exertion, and death may occur suddenly. If the case be a kidney heart, we know that a glomerular nephritis or a chronic interstitial nephritis exists, and that if the individual does not die of uremia, he will die of heart failure. If the case is one of arteriosclerotic heart, we know that the heart condition is secondary to the arterial changes, and our efforts will be directed to, if possible, reduce or limit the arterial changes and conserve the heart's strength. If the systolic pressure has been high, begins to fall, and we find a mitral systolic murmur, we must conclude that the heart has to an extent stretched. If marked anasarca, with some cough, dyspnea, and cyanosis, be present, the heart has dilated, nutritional changes have taken place,

and we have a dying myocardium. If anginal attacks are common, we must infer that the coronary arteries are to a considerable extent occluded, and the time is not far distant when the myocardium will fail, if death does not occur suddenly in an anginal attack. If the case be a syphilitic aortitis with frequent attacks of exhaustion, with or without dyspnea, we can infer that the arch is badly dilated, and if to this be added anginal attacks, that the myocardium is badly involved.

Occasionally, we find an individual from sixty to seventy-five, with but little increase in the blood pressure, where no murmurs are to be found, and the most important symptom complained of is weakness upon almost any kind of exertion. The urine may show a trace of albumin and some casts, the feet and ankles will be swollen at night, they require two or three pillows to sleep. Here we have an arteriosclerotic condition confined mostly to the coronary arteries and aortic arch. The changes in the myocardium are nutritional, and the outlook is bad.

2959 Washington Blvd.

PREVENTION AND TREATMENT OF WOUND SHOCK IN THE THEATRE OF ARMY OPERATIONS.*

DONALD MACRAE, JR., M.D.

Ex-Colonel M. C., U. S. A.

COUNCIL BLUFFS, IOWA.

The suggestions herein offered by the writer are made with the idea of bringing out the practical medico-military aspects of war surgery in a general way, rather than to confine the discussion to a technical article on shock, in its relation to cause and effect upon nerve and other tissue changes, which latter, after all, is purely a question of chemico-pathology, surrounded by most interesting problems yet to be solved, but not intensely fascinating to the wounded soldier dying in the shell hole.

Fifteen years ago the writer attempted, in his feeble way, to interest the civil physicians in war work, but met with an equally feeble response. The recent world war has demonstrated beyond all question of a doubt that the civilian doctor must be taught the principles, not only of war surgery *per se*, but must be made acquainted with the general conduct and management of hos-

*Read before Tri-State Medical Society at Rockford, Sept. 2-4, 1919.

pitals, ambulance organizations, sources of supplies, evacuation of the sick and wounded, conservation of men and food and many other important subjects, including a certain amount of training in military discipline, all tending to an intelligent coördination and mobilization of plans and ideas necessary to a successful issue. I am sure a chair of real military medicine and surgery conducted as an important branch in our medical colleges would be of immense value to our country. For the first time in history the army has recognized the medical department; this is absolutely true of the British and French, and the thought was beginning to dawn upon our own establishment before November 11, 1918.

The medical profession is now awakened to the fact that war means *service*, that every able-bodied doctor of military age should offer his services when his country calls, but *he* owes more, for he should be educated, not only in the art of war surgery, but the practice and principle of everything connected therewith. Thus a finished product rather than raw material is immediately available. But what has all this to do with the subject under consideration? To my mind, *everything*. The most efficient war operating surgeon is of little use if all cases received by him are in profound wound shock. The mortality in front line hospitals was largely due to shock. If my statement is correct, then greater interest and more thought must be given to the wounded, under conditions existing in positions prior to being received by the operating unit.

Again the necessity of early evacuations from front line operating units *ofttimes* endangered the lives of the wounded (shock). This condition may or may not be corrected by more thorough preparedness and more intelligent coördination and coöperation by efficient men trained and selected to solve these problems.

Unless that interest and responsibility are equally shared by all officers from no man's land to the base, no intelligent coöperation can ever be accomplished, therefore the excuse for this paper.

PREVENTION OF WOUND SHOCK

In order to cover this important subdivision of the subject under discussion, the writer finds himself almost discouraged. The time allotted to the reading of this paper, and the monotony of rearranging "field regulations" would be a task

too laborious and uncertain for the writer, and more impossible for the audience, were it imposed to remain throughout the reading. However, a general outline may not be out of place, and with many misgivings the writer offers the following:

Having had the privilege of direct contact with Captain Cowell, R. A. M. C., early in 1919 while on the British front, and having great confidence in the opinions of this most competent young officer, I can do no better than give his conclusions, the result of an extraordinary experience:

The observations on wound shock by Captain Cowell are based on results of personal scientific investigation on wound shock. In order to place the whole matter on as scientific a basis as possible, this officer left the casualty clearing station and went to live in the trenches with the soldiers, and thus acquainted himself with their habits, their food, and, in general, the life and surroundings of the men who were constantly coming up into the front line trenches, to serve their allotted time in the line. As a matter of great importance, to get correct data, he took the blood pressure before and after the man was hit, using the Tycos instrument and recording the pulse and respiration. In order to be sure to have the blood pressure of all men who were hit previous to the wound which they might receive, Captain Cowell made readings of all the men in the section where he lived. It may be well to state that no man lives under normal conditions in the trenches. In the first place they have but one pint of water a day, and they usually get only three or four hours sleep, which is in the day time, because no one can lie down at night. In the second place, they stay six days in the front line trenches before being relieved. It was noticed that the blood pressure in a quiet bay was apt to be quite low—from 105 to 115, but under the excitement of a raid or any degree of permanence in a bad bay the pressure rose to 140, even to 160. As a rule there is a high pressure just before something happens. This is said to be accompanied by increase in the adrenin content of the blood. Man is naturally a fighting animal and before a battle his blood pressure goes up. Excitement and worry create a corresponding high blood pressure to give to the cells the nourishment they will need in the struggle to come. The coagulation time of the blood shortens in order to control hemorrhage, the viscosity increases enormously and more glucose is liberated from the liver than normally. In nature the pendulum always swings back after a while and relaxation always follows. A prolonged, excessive effort, eventuating in fatigue (which is a big factor in shock), together with the excitement, worry and high tension of six days in the trenches, with little sleep, much cold, wet, and with insufficient nourishment, bring about a combination of insults to the nervous system, causing its inner mechanism to become disarranged, with relax-

tion of the vaso-motors. In addition to all this there is a decided lowering of the alkalinity of the blood, causing acidosis.

While Captain Cowell was making his trench observations, our Captain Cannon, of Harvard University, was working in collaboration with him, making the same observation in the rear at the casualty clearing station on the arrival of those same patients.

Shock is the *bête noire* of the military surgeon, and it stands in the way of successes in military surgery which would be otherwise easy to obtain in many cases. Wound shock has been defined as a condition in which the blood is out of circulation, and, therefore, the English Shock committee decided upon "Exæmia" as the best name for the condition—a name, by the way, which was used by Hippocrates.

In artificial shock produced in animals, the large vessels of the trunk are found empty, a condition which has been verified on the human being in war, so the splanchnic pool theory cannot hold. Crile's method, admitted as being important, cannot be interpreted to extend the cause of shock. His view that there are primary changes in the nerve cells is not tenable because they are the secondary result of anemia.

Shock can be produced by the introduction of repeated doses of adrenalin, and as a matter of fact, clinically, it is of no value in treating the condition. There is a diminution in the volume of the blood, but as yet we do not know where the blood goes to. There is a curious accumulation in these pale patients of red blood cells in the capillaries, giving high counts of six million, and a hemoglobin percentage of about 100. It would seem that these changes in the blood are due to circulatory failure; there is a very low pressure and an acidosis which varies inversely as the blood pressure rises. In shock the blood pressure drops to 70 or 80 and the temperature is subnormal. The reason why the cardiac muscle fails when the pressure is reduced to 80 millimeters is, that there is not enough force to overcome in the blood stream, and the heart does not longer beat with its customary vigor. But the cause is not always a question of blood pressure. Nor is chilling alone enough to cause shock. Nor is it a question of general weakness, as Captain Cowell called attention to the fact that a dying man with a blood pressure of 30 from shock, still has good muscles and a firm hand-grip and frequently requires two or three orderlies to hold him on the bed. All of this means that, frankly, we do not yet know what shock is.

We have already noted what we had better call *preshock* conditions. They are lack of water, fatigue, loss of sleep, lack of food, and with continued high pressure. There are three degrees of shock recognized by Captain Cowell:

First, that in which there is no depression of the blood pressure; slight cases of shock;

Second, those in which there is no immediate danger from moderately severe wounds, but in whom shock comes on later, there being none at first; even certain

perforating wounds of the abdomen falling under this head;

Third, the most severe or mortal wounds in which shock comes on immediately; the pulse goes down, the patient begins to sweat, and it looks as though he were going to die.

These are the clinical degrees of shock usually seen. They can be grouped again into:

1. Those who have lost little or on blood;
2. Those who have lost much blood, and
3. Those with multiple wounds.

A fourth classification might be added—those suffering from sepsis and a combination of the other three.

In the first class, in which the wound is apt to be trivial, there is no real shock but the patient is simply emotional and has had an increased blood pressure.

In the second class of cases, those who have lost much blood, are anatomical injuries of importance in chest, thigh, buttock, etc., regions that are especially predisposed to shock.

Gas gangrene always produces shock.

From this classification you may divide shock into (A) primary wound shock and (B) secondary shock.

In the secondary shock, whatever the cause may be, it seems to be initiated or gradually increased, by the following particular elements:

Cold, fear, pain, hemorrhage and sepsis.

Fear is an important element in all of them.

Primary wound shock is usually fatal. Secondary wound shock is largely preventable. That is to say, either trivial or moderate shock may be turned into severe or mortal shock under those influences, and it may be prevented by overcoming or alleviating these conditions. We must distinguish clearly between psychic impression and shock. Captain Cowell calls attention to what we have all seen: Very brave men who faint every time they see blood; but in these cases the blood pressure was often normal. In cases of severe shock there seems to be a general anesthesia, allowing one to operate without an anesthetic, but we should remember that such cases are liable to die without any pathological findings. Shock of emotional origin comes on immediately, which is a point of diagnosis between it and true secondary shock. We must make great efforts to educate the medical officers at the front along the lines laid down in this paper for the prevention of shock which does *not usually appear until the patient reaches the casualty clearing station*. Slight wounds are often followed by severe shock, particularly when multiple, and in such cases gas gangrene is favored in its development. The emotional element in shock is often seen in irritable and nervous patients, in whom it is always exaggerated; but it has a very decided influence in deepening shock and it is a grave factor when it intervenes to any extent. It is curious that wounds of certain parts of the body cause more shock than in others. For instance, head wounds give comparatively little shock, while those of the chest, abdomen and upper third thigh give a great deal. There is a difference in

color between a person who is shocked from loss of blood, in which the skin has a marble white pallor, is cold and clammy, and a person shocked without hemorrhage, in which the patient has a dirty, livid color.

TREATMENT OF SHOCK

The first measures for the prevention of shock are taken at the regimental aid station and are repeated at the advance dressing station and the main dressing station, and, if necessary, even at the casualty clearing station. Men should be carried through the trenches with a sufficient dose of morphine to dull their pain and reduce their apprehension. Large doses of morphine do more harm than good. An average dose should be about a quarter of a grain. They should be transported in warm ambulances and at every station they should be warmed on the litter by the method elsewhere detailed. Too much emphasis cannot be placed upon this as it is a great preventative of shock. An important means of treating shock is alkaline drinks which should be furnished the soldier, as it combats the acidosis and thereby reduces shock. A good dose is one teaspoonful of bi-carbonate of soda in a hot drink of water. Hot fluids by the rectum and intravenous injections of adequate solutions can be given but you should not inject these things under the skin because it does no good. Ordinarily a deci-normal salt solution is not as good as the 2 per cent or even 4 per cent of hypertonic salt solution. Better than this, however, is the treatment initiated by Colonel Bayliss, who first used a 7 per cent solution of gum arabic, which has the same viscosity as the blood; but by experimentation Captain Cowell found that the best combination is a 5 per cent gum arabic solution with 4 per cent of sodium bi-carbonate to counteract acidosis. This gives the most satisfactory results and is a fair substitute for transfusion in case of shock following hemorrhage. In plain shock the sodium bi-carbonate solution alone should be used. Indeed, sometimes you will find clinical evidences of acidosis with hissing respiration, vomiting and extreme restlessness. In these cases if you will use a 4 per cent solution of acid sodium bi-carbonate it acts like magic. To make up this solution you boil the 5 per cent gum arabic solution first, and allow it to cool to 150 degrees Fahrenheit; then you add your 4 per cent solution of sodium bi-carbonate. This gives a milky solution. You must never boil the sodium bi-carbonate solution.

Transfusion at the front is not an easy thing to do and there is reason to believe that it is being actually overdone. In extreme cases where all conditions are favorable, it, of course, may be tried, but it should be remembered that for transfusion of blood one needs a proper donor, and this is very difficult to arrange for.

It is always best at the casualty clearing station to wait a while before operating. Never use chloroform as an anesthetic for a dangerously wounded man. Gas and oxygen are the best; but the vapor of ether is good. One should avoid the production of cyanosis

as this increases the amount of CO_2 and augments shock. Local and spinal anesthesia is condemned as impracticable.

At the casualty clearing station the treatment of the man who comes in in shock should be as follows:

1. Put the patient to bed, warmed with hot bottles or electric pads, and by the method of heating a litter (already described), or place over him a hood, heated by a lamp connecting with a stove-pipe which enters the hood, or by a group of electric lights. When using the hood one should always keep the face exposed so that the patient will not re-breathe his air and get too much carbon dioxide, which increases the acidosis and thus the shock.

2. Rectal fluids can be injected, or intravenous injection employed; or in the last case even transfusion may be practiced.

The writer heartily endorses everything Captain Cowell advocates except the use of gum salt, and the use of local anesthesia. While with Captain Cowell on the British front the writer did witness improvement in many cases following the use of gum salt, but later at Chateau Thierry, St. Miheal and the Argonne fronts, the use of gum salt in U. S. Mobile Hospital No. 1, a hospital which operated on nearly 7,000 wounded soldiers, proved not only useless but harmful to such an extent that it was abandoned.

The gum salt used by U. S. differed, however, from that used by Captain Cowell which may have been responsible for results obtained. Captain Cowell used a 5 per cent gum arabic solution with 4 per cent sodium bicarbonate to counteract acidosis, while the American preparation was a 6 per cent gum acacia and 0.9 per cent sodium chloride in distilled water.

In our experience the fluids used for intra vascular work, which gave best results were: Blood, citrated blood and saline.

I wish to emphasize what Captain Cowell says concerning "waiting a while before operating." The writer recalls many (one time very disagreeable) arguments with certain Cos' concerning this question.

Every seriously wounded man should be put to bed and heat applied, a hot saline drink and a good rest given before even going to the x-ray hut.

All severely wounded men are in shock or *near shock* when received at the Mobile Hospital, and for the latter, the time and manipulations required for x-ray or the short anesthetic and quick operation ahead—may be the final straw to produce a fatal termination.

Just here it may not be out of place to mention a personal observation concerning the personnel of "shock teams" as sent up by our army officials, which may be worthy of discussion. Some of these officers were young men just out of college, with little or no surgical knowledge, who, in the writer's opinion, were not sufficiently experienced in surgical judgment to determine correctly the conditions present. The greater number of these men were not surgeons in any sense of the word.

I am satisfied the trained surgeon is much better qualified to judge of the degree of surgical shock—of when and when not to operate, etc., than the medical man however well trained he may be, in the practice of internal medicine; therefore, in the opinion of the writer, the general all around surgeon should act as head of a shock team. Major Yates, here present, and Lt. Col. Miller of Base Hospital 27, both chiefs of operating teams in Mobile Hospital No. 1, while on the Argonne front, may recall the difficulties encountered by having inexperienced men sent up on "shock teams." I do not wish this statement to go out as a criticism of these young men, for they were capable gentlemen in their own line, but rather as a suggestion for the future chief of the shock service to consider.

The writer wishes to emphasize the importance of having the best man as a triage officer. He should be a man of sound surgical judgment with much experience in order to diagnose the *near* shock cases.

Hundreds of cases leaving our Field Hospitals in good condition were admitted to Mobile Hospitals or advanced Evacuation Hospitals in extreme shock, some were dead on arrival, having passed away in the ambulances. Gas gangrene, by fighting shock, whatever shock may be, can be postponed, thus giving the patient a better chance after the operation of debridement.

The author is satisfied that double the number of field hospitals now authorized should be supplied to each division. That four Mobile Hospitals, each with one hundred and fifty beds for the wounded and ample accommodations for a large surgical personnel should work together as a team. All four to be in active operation during fixed battle lines, but during advances the one in the rear to be packed, and ready to go ahead with the troops. In other words, a modified leap frog movement is inaugurated. In addition to the

already understood Field Hospitals, etc., Mobile Bed Units under the command of a Sanitary Officer with an enlisted personnel of tent pitchers and trained orderlies of the medical corps would be of immense value in preventing shock. These units subject to call from either field hospital or mobile operating hospitals. At least six of these units, each capable of erecting tentage and beds (straw or cot) to accommodate four hundred. These tents and equipment should be similar to the field hospitals, light and easily manipulated and above all should be thoroughly supplied with heating devices and hot drink equipments. The bed units to be corps organizations.

Each Mobile Hospital should be supplied with 12 3-ton trucks, one light fast truck, one staff car, one motorcycle, one motor water wagon, and three ambulances, as a part of the permanent transportation equipment. The entire transportation facilities of these of mobile hospitals. Thus 48 3-ton trucks are always available, 12 ambulances likewise are at the disposal of the director. The above plan, of course, should be augmented by many other important and necessary adjuncts too numerous to mention at this time. Among them, however, may be mentioned the following:

1. Increase trained personnel for aid and dressing station.

2. Training of every officer and man of the army in the principles of "first aid," litter bearing and the danger of shock and the necessity of heat and saline drinks.

3. Good splinting, especially the Thomas variety, and the training of all enlisted men in their application. (In the British army the trained Tommy could apply a Thomas splint to a fractured thigh in four minutes.)

4. More equipment for heating of the wounded in dressing stations and field hospitals.

5. Most experienced officers selected for surgical triage.

6. Hot Thermos bottles containing alkaline drinks as part of the equipment of ambulances, in addition to better heating devices for the ambulance itself.

7. Special marks for severely wounded in order that greater care may be taken in transportation, as well as a signal for immediate attention on arrival at destination.

8. For Field Hospitals, less surgery and more beds, more heat, and more hot saline drinks.

9. For Mobile Hospitals, less shock and more surgery.

The writer in closing wishes it thoroughly understood that he appreciates the difficulties which had to be overcome by the Medical Department of the army. He is thoroughly satisfied, too, when history is written, that the medical service of the U. S. army will shine out above all others, at the same time we must all recognize the fact, that *many* mistakes were made, time and motion lost, the result of lack of preparedness of the entire country; and many obstacles had to be *overcome* on account of our own lack of interest before the war as well as the oversight and lack of appreciation of the Regular Medical Department of the Army by the War Department and Congress throughout the years preceding 1917. It is up to the civil physician to take further interest, learn something from the post mortem and insist upon fair play even in time of peace, for it is not for ourselves but for the sick and wounded we take our stand. And, finally, I wish to thank your society for the kind invitation to be present here today. In the meantime, let us pray for peace and prepare for wound shock.

DISCUSSION

DR. JOHN L. YATES (Milwaukee, Wis.): I should like to have the privilege of trying to discuss two points that Dr. Macrae made: First, to testify to the accuracy of every statement he has made about conditions in those front area hospitals; and then, to give an interpretation, perhaps, of another point of view about Dr. Cannon's work with gum salt solution in the treatment of shock.

Dr. Macrae suggested that everything was not ideal in taking care of those wounded men. There is less than nothing to be gained by making carping criticisms of what was or was not done. We need not lament now about the poor fellow who didn't come back who might have been saved; we can't help him. The fellow we are looking after is the boy who is going out next time. It is our duty to see what we can accomplish, not only by criticism, surely not by insulting talk, but by telling and acting upon the plain straight truth. We must find a way of compelling a re-organization of the Medical Corps of the Army upon a basis that will be sufficiently effective to give to the wounded man in the next conflict something that he did not get in this last show, to-wit: a square deal.

I had the privilege of being, from July 18 until November 15, exclusively in front area hospitals that were designated for the care of non-transportable wounded. That involved seeing the injured from several divisions in line, occasionally the same division at different times, and included the experience

obtained when the weather was dry and hot, when there was intermediate weather, and when the weather was cold and wet.

We have seen the shock salvage vary in the same drive, this being the Chateau Thierry fight, from perhaps forty per cent and better down to less than ten per cent or worse. It was due, in that particular fight, not entirely to time and length of transportation, because the worst results came with the shortest lines of transport. This was because these men, when they went into the line, were in such rotten shape that a mere perforating wound in the foot by a machine-gun bullet was more than apt to result in death within about eighteen hours of the time the patient was received in the advance hospital. This was due to over-exhaustion, under-feeding, and above all, under-watering, before going into the line.

The command of this division that showed such poor results happened to be broken at that time. Later on, we served behind the same division with Colonel Macrae's unit. The men came back only fairly promptly, but instead of coming back virtually moribund, they came back in comparatively good condition.

Just here we can discuss the treatment end of shock. That is just as valuable, more valuable perhaps, in civil practice.

Let us forget, if we can, the so-called mystery that surrounds the origin of shock. One fact that we do know about shock, from the therapeutic standpoint, is that prevention by the grain is worth cure by the ton. The one thing that must be avoided is allowing systolic blood pressure to remain below eighty H (80) millimeters of mercury for longer than two hours. If that is permitted, there is going to be developed progressive degeneration of the so-called vital centers of the brain, and no matter how soon thereafter blood pressure is returned to normal, death must almost inevitably result.

The great handicaps to proper shock treatment in the American army were the way the forces had to be spread out because of the type of fighting, and our damnable lack of cooperation and coordination in being unable to maintain in advanced dressing stations adequately prepared and trained shock teams.

Colonel Macrae said that the gum salt solution furnished by the American army failed. That is both true and untrue. It did not fail when given properly as is certified by experiences during the warmer weather. After the cold weather began it failed. Why? Not because gum salt solution was poorly made for the American army, but because the principles governing its administration were inaccurately appreciated. By the time the men were got back where shock teams were available and they could be given as good anti-shock treatment as is possible by the means of gum salt solution, those men were physiologically beyond recovery as shown by the failures of blood transfusion to produce more than temporary resuscitation. Miracles were expected of gum salt and it was condemned for failing

to accomplish the impossible and for doing actual harm when improperly given.

We have to indulge in personalities in order to make more clear to you who didn't see that fighting what units like Colonel Macrae's were up against, and then perhaps public sentiment will get strong enough not to ask but to *demand* that the Medical Corps of the United States Army be re-organized not eccentrically around the Surgeon General, not around authority like that, but concentrically around the one thing that justifies the existence of the Medical Corps, namely service to the sick and wounded (applause). Just so long as our Medical Corps worships rank, just so long as professional attainment is not the means to preferment in the army, just so long as the clever fellow who knows how to play politics and not the man who knows his job gets promotion in the army, just that long we are going to sacrifice the lives of our men.

I want to cite you an instance. There came to France in August, 1918, a draft division from the United States. This division was under, as far as the Medical Corps was concerned, a Chief Surgeon who afterwards proved himself to be a man of the highest ideals and willingness, but he came a product of the teachings of the Regular Army. He came with the idea that the only things that were worth consideration were whether or not his sanitary formations knew what "stretchers left" and "stretchers right" meant, whether or not they could get their tent pegs up at the proper distance apart and latrines dug as specified in the blue book, whether or not all reports were made out properly and submitted in triplicate. Those were the things that occurred to him as being the real essentials of the medical end of the military division.

It wasn't until after he had been in France for some time that he had a chance to come in contact with men who had actually been taking care of the wounded, and for the first time (and he was a man of intelligence, too) did he realize that he was up against a proposition not of setting up tents but of getting on splints, treating shock, getting the wounded man back in time to have a chance for his life. It was not until then that he awoke to his obligations. Within three weeks, his division was in one of the nastiest corners of the Argonne fighting. They had hardly gotten their field hospital set up and going when they were knocked down by Hun shells. He was game, set up again and did the best job he could, even if conditions were rotten. His efforts were not entirely successful, not because he didn't try to do his best but because nothing better was possible for him at that time. We saw the man afterwards. He was one of the few Division Surgeons whom we saw who took the time to come back to the field hospitals or to these mobile units and look out personally for the care of his men and try and see if he could do this or that or the other to make that care better. A more heart-broken man you never saw. That man was criticized. He was threatened with court-martial.

His training alone can be criticized for his not having delivered better goods. It wasn't fair. He had been developed under a faulty system. Don't let us criticize the Regular Army officers as individuals. It is the system we are after, and the system is too big and too strong for any effort to break it unless that effort is united and is impelled only by interests centered on the wounded man.

The French, the British, the Belgians, found that optimum period for treating the wounded was less than eight hours after injury. After that, their chances of recovery went down with more than proportionate rapidity.

We were detailed to one job, and that was to try to find out a means of standardizing the treatment of thoracic injuries, and as a result we were sent forward where the wounded men were supposed to get back the quickest. In looking up our statistics which are quite as worthless as other statistics, we did get this one point: That the difference between the favorable results and the unfavorable results was two hours. It was the difference between twenty-two and twenty-four hours. If we take the whole A. E. F. experience, it is going to show that twenty-six hours plus was the average time for the delivering of our men back to the place where they could get care and treatment.

THE TREATMENT OF GONORRHEA IN WOMEN BY THE METHYLENE-BLUE PROCESS*

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A PRELIMINARY PAPER

Gonococcal infection of the genito-urinary tract of the woman may well be termed the *bête noir* of the gynecologist. Once firmly engrafted in the meshes of the mucosa and in the deeper submucous layers, it seems almost impossible to eradicate the germs, notwithstanding the peculiar readiness with which the gonococci are killed by antiseptic agents which come in direct contact with them. So true is this that many eminent gynecologists have come to the conclusion that gonorrhea in the woman is incurable. I wish to differ with this deduction and to go one step further and say that I believe the disease is readily curable in the great majority of cases, a small percentage only resisting treatment for any considerable length of time. Were the genital mucosæ—those of the urethra, vagina, and cervical canal—plane surfaces, readily accessible, it would be a matter of not more than twenty-four

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to seventy-two hours to cure gonorrheal infection of those surfaces. Thorough cleansing with sterile water or normal salt solution followed by the application of any gonococcocide would do the work in that time. The crenated, convoluted mucous surfaces and their tubular arrangement are the disturbing elements in the rapid abortive treatment of the disease. To these may be added the other factor—penetration of the mucosa at the expiration of 36 hours by the germs, which then lodge in the deeper tissues where they are not reached by the microbicidal agent and where they generate fresh crops of the diplococci and thereby produce a constant re-infection of the invaded structures. It is because of these unfortunate conditions that the disease has resisted treatment of any kind, so that both patient and doctor become discouraged and pessimistic as to the ultimate cure.

The multiplicity of the remedies which have been employed in the treatment of gonorrhea, and their protean character, is ample proof of the unsatisfactory results obtained from their use. As the treatment of gonorrhea is essentially local, with but few exceptions, this practically restricts the remedies which can be employed in female gonorrhea to antiseptics and microbicidal agents, and these are used in the vast majority of the cases in the vagina and cervical canal only. Notwithstanding the oft-repeated statements of text-books, I believe that gonorrheal urethritis in women is a rare condition clinically. In about 20,000 women personally examined by me, gonococcal involvement of the urethra has been noted in but comparatively few instances. It may be commoner than I think, for it is true that when the urethra is involved in this disease in women it is apt to heal much more quickly than in men, and by the time we see the patients it may have disappeared. The statement that chronic urethral gonorrhea in women may last for years is, I think, at least open to disputation. The natural site of infection in the woman is the vagina; the tendency is for the vaginal gonococcal discharge to escape over the fourchet and perineum rather than over the vestibule, and it is generally acknowledged that in the older cases gonorrhea is found much more frequently in the cervix than in the urethra. Vineberg and others state that gonorrheal cystitis is very rare in women, and that when

it is present it is marked by extremely severe pain in the bladder, especially at the close of micturition, which is accompanied by a discharge of blood and pus. In my experience Suchanek's statistics have not been verified. He found in 166 cases of gonorrhea that both the vagina and urethra were affected in 122, while urethral gonorrhea existed alone in but 3 cases. It is my invariable custom to examine the urethra carefully for the specific infection, and if present it is not overlooked.

When the urethral mucosa is involved, there is, in acute cases especially, intense prickly burning during and immediately following urination together with a discharge of pus which may be squeezed out of the urethra by pressure along its course in the anterior vaginal wall. The external meatus and urethral mucosa are red, swollen and edematous, and the orifices of Skene's glands, which may be seen by everting the urethra, are pouting and angry. The urethra is thickened and infiltrated to the touch. The only other conditions, as Bandler indicates, which can produce such symptoms are urethro-cystitis following catheterization, septic ulceration, puerperal fistulae and degenerating malignant growths. Chronic infection of the urethra will show the so-called gonorrheal macule, or flea-bite appearance, surrounding the external urinary meatus.

Gonorrheal vaginitis, on the other hand, is an exceedingly common affection with characteristic symptoms which need not be mentioned here.

Norris, who has probably given more attention to this condition than any other man in this country, has named three qualifications as essential in an efficient gonococcocide. These are, primarily, a decidedly destructive action on gonococci and the other associated organisms, such as the staphylococcus—for almost invariably the disease is a mixed infection as encountered clinically; secondly, the ability to penetrate the tissues locally without losing its germicidal properties, for certain organic matters and other constituents in the mucosa are very prone to speedily induce chemical changes in the germicides whereby their microbicidal action is annulled; and, thirdly, a non-irritant action on the tissues with which the agent comes in contact.

Following this line of thought, many agents

have been tried out, most of them speedily to find their way to the discard heap. Those which have stood the test, although unsatisfactorily in their clinical results in varying degree, are the bichloride of mercury, the action of which is slow but effective even when used in high dilution; the biniodide of mercury in the form of the well-known germicidal discs, which constitute the most effective preparation of mercury for this purpose; picric acid in a 12 per cent. (saturated) aqueous solution, which Norris states is fifty times more germicidal than a 1 per cent. solution of carbolic acid; silver nitrate in a solution of 1 to 5,000, which is vastly superior as a gonococcicide to either argyrol, protargol or lactol; tincture of iodine, which though irritating to the mucosa, penetrates the tissues, as of the cervical canal, and even in weak solution promptly kills the gonococci; carbolic acid in solutions of strengths varying from 1 to 5 per cent.; lysol in a 1.5 per cent. solution; kresol in a solution in glycerin of 50 per cent. strength; creolin in a glycerin solution of 75 per cent. strength; and 30 per cent. alcohol, which is best employed in combination with iodine. Döderlein, who discovered that the long rod bacilli whose normal habitat is the vagina secrete an acid environment which is practically lactic acid, conceived the idea that a 1 per cent. solution of lactic acid would prove inimicable to the pathogenic germs and would restore the normal acidity of the vaginal secretion. This substance, however, was found to be too caustic and had to be abandoned. It is now known that strong caustics favor rather than retard the course of gonorrhea on account of their irritating and destructive action upon the affected tissues.

It will be noted from the foregoing list of microbicidal remedies that the pharmacopeia has been very thoroughly ransacked in the effort to find a suitable and efficient gonococcicide. The very number of the agents tested is ample proof that none has been found to be eminently satisfactory for the purpose. There remains, however, a group of agents of more recent development and not so generally known to the profession, the action of which has been found to be satisfactory enough to warrant further investigation. I refer to the microbicides of the coal-tar group of derivatives, two of which are worthy of special attention, namely, methylene-blue and acriflavine,

the latter being another methyl derivative (diamido methyl or diamido-acridinium). Acriflavin, which was first prepared by Benda and Bertheim in 1908, is claimed to be eutherapeutic and the only chemical compound known to science which, when directly introduced into the blood does not destroy the white blood-cells and is enhanced in its bactericidal action by the presence of serum. In this respect, it is claimed, it is contrary to the action of any antiseptic chemical used heretofore. In the last two years it has been employed in the treatment of specific urethritis with considerable satisfaction, and is said to inhibit the development of the gonococcus in a dilution of at least 1 to 300,000, which is six hundred times the strength of protargol as a gonococcicide. With this agent I have had thus far no experience. It is to the other methylated coal-tar product that I wish to call your attention at this time.

Since its discovery by Caro in 1876, methylene-blue (methyl thionine or tetramethylthionine hydrochloride, $C_{16}H_{18}N_3SCl \cdot 3H_2O$), a synthetic dye color belonging to the class of thiazines or dyestuffs in which two benzene nuclei are united by a nitrogen atom and a sulphur atom, has been known to possess strong bactericidal properties. By way of precaution I would mention that it must be distinguished from methyl-blue, otherwise known as methyl-violet or pyoktanin, a highly toxic substance which it closely resembles in some respects. Methylene-blue, when administered internally, is also toxic, but to a much less degree. When taken in large and poisonous doses it produces a marked increase of the reflexes of the body, increase in the respirations, strangury and irritation of the vesical mucosa, muscular paralysis and death. There is also a marked destruction of the red blood-corpuscles, resulting in the production of a chocolate-colored blood (methemoglobinemia), a consequent loss of oxygen in the tissues, a tendency to thrombus-formation, and a rapid degeneration of the parenchyma of the organs. The heart is found to be flaccid; there is pulmonary atelectasis; hepatic engorgement exists, with blue discoloration of the biliary ducts and of the gastric and intestinal mucosæ. There is also noted at times after its prolonged administration, or after fatal doses, a great accumulation of iron in the liver. It has no colorizing action upon healthy

protoplasm; and Mikhailoff has shown from experiments on frogs and rabbits that the leucocytes do not fix the methylene-blue until within a short time before death, and even then very rarely. The remedy, when administered internally, is eliminated mainly (50 per cent.) by the kidneys, producing a greenish-colored urine, and probably in its passage through the body being altered in some if not all of its local physiological properties. It is also eliminated by the bowel and in the saliva, Lemanski and Main finding it in the latter secretion within forty minutes after its ingestion by the mouth, and in one hour and fifteen minutes after its administration by the rectum.

What is of especial interest to us in this paper are the two main clinical actions of the drug, namely, its analgesic and microbicidal functions. Ehrlich and Leppmann have found that the sedation of the motor and sensory nerves following the use of the drug is due to an elective affinity for the axis-cylinders of the nerve-endings, which it deeply stains. This action is noted whether the drug is administered internally or applied locally to the affected parts. In addition to this sedative action, methylene-blue is an excellent microbicide, killing hematozoa in a 1 to 20,000 solution, and gonococci in solutions as weak as 1 to 150,000 or 1 to 200,000. It also coagulates pus and prevents fermentation. It possesses in a high degree the three gonococcicidal essentials required by Norris; that is, it is not irritating when applied locally; it rapidly penetrates the tissues without being altered chemically or physiologically in its properties; and it is rapidly destructive to the gonococci and associated pathogenic microorganisms. It especially exhibits a selective action on cultures of *Bacillus subtilis* and *Micrococcus aureus*, according to Churchman. It is probable that its comparative uselessness when administered internally in the treatment of gonorrhea in the male is due to some alteration in its physiological properties during its passage through the body.

During the past fifteen years I have used methylene-blue locally in gonorrhea in the woman in a very large number of cases with astonishing and most gratifying results. My clinic today is filled with gonorrheal cases which are all showing marked improvement and are rapidly advancing to a cure. In order to avoid

a premature exploitation of the merits of this remedy as a gonococcocide in female gonorrhea I have refrained from publishing a report of my findings until this time. The many post-graduate students and others who have seen the results obtained are today most enthusiastic in their endorsement, and I am frequently receiving letters from them in various parts of the country, after years of employment of the drug, repeating their gratification at the results obtained. The time is ripe for a full presentation of the method, and in this preliminary paper the fundamental principles are laid down for the use of the profession generally.

Let me emphasize right here some points concerning which I am invariably asked by those who visit my clinic. In the first place, the drug is employed locally only. The use of methylene-blue internally in the management of urethral gonorrhea has proved inefficacious. This difference in results is due, in all probability, as I have already stated, to some chemical or physical alteration in the drug during its passage through the body; to the fact that not more than 50 per cent. of the drug when taken internally is eliminated through the kidneys; and also probably, to the difference in the mucous membranes of the urethra, male and female, and of the vagina. It will be remembered that the male urethra is clothed with an epithelium that varies in different parts of the canal, above resembling that of the bladder, then becoming columnar in the prostatic portion, and at the navicular fossa becoming stratified squamous in type (*Piersol*). It is also abundantly provided with crypts and glands (Littre's), which afford excellent lurking-places for the gonococci. The female urethra, corrugated as in the male, is lined with a stratified squamous epithelium which above resembles the vesical type and below that of the vestibule (*Piersol*). It also contains the glands of Skene just within the meatus, and other glandular organs, but is only one-and-a-half inches in length. The vagina, on the other hand, is lined with a proportionately dense stratified squamous epithelium which is devoid of glands. Whether for this reason or for other indeterminate causes, methylene-blue in solutions of appropriate strength, locally applied, exerts a remarkable effect upon vaginæ and female urethræ diseased by gonorrhea.

Secondly, I have never used the method I am

about to describe in gonorrhea in the male. Whether or not topical applications of methylene-blue to the male urethra, either by injections limited to the diseased portion of the urethra or by direct applications made with the aid of the urethroscope, would prove efficacious, I cannot say. It would not be amiss to make careful experimentation along this line, and my assistant, Dr. Zolla, is now engaged in such an investigation, the results of which will probably be announced at some future date.

Thirdly, it has been found that a one per cent. aqueous solution of methylene-blue is most efficient in the treatment of vaginal, urethral and uterine gonorrhea. Stronger solutions, while eminently gonococccidal, are too irritating to the surfaces involved and thereby lose one of the important qualifications indicated by Norris. In the designated strength methylene-blue not only acts upon the micro-organisms, destroying their vitality and virulence, but it also exhibits a remarkable curative effect upon the inflamed surface and a striking analgesic action. In from twelve to thirty-six hours the soreness, pain and discomfort complained of by the patients have entirely disappeared in almost every instance, and there is a decided diminution in the pus-secretion after the third or fourth day, and a rapid disappearance of the mucosal congestion. D'Aulnay, who used a weaker preparation of the dye in combination with potassium iodide and alcohol applied on cotton tampons, claimed cures in about twenty days.

The method of employment is as follows: After thorough cleansing of the affected parts—vagina, cervical canal, urethra—with plain sterile water or a warm normal salt-solution, the surface is well dried. A cotton-wrapped aluminum probe, or a small pledget of cotton held in the grasp of a uterine dressing-forceps, saturated with the one per cent. aqueous methylene-blue solution, is carried to the internal os uteri, which in the vast majority of cases is found to be closed. If it is closed, the application should stop at this point; but if the internal os is patulous, the instrument should be carried to the uterine fundus. The dye is rubbed in thoroughly and the instrument withdrawn. A larger loose pledget of cotton, held in the grasp of the dressing-forceps, is then saturated with the solution and the entire external surface of the cervix and the vaginal mucosa is bathed pro-

fusely in the blue down to the ostium vaginae. The excess of the solution is squeezed out by pressing the pledget of cotton upon the valve of the speculum, and the lake of fluid thus obtained is emptied into the vagina as the speculum is withdrawn. A pledget of cotton held at the posterior commissure of the vulva catches the fluid as it escapes from the vagina, and the patient is instructed to bear down in order to expel the remainder of the solution. Special care should be taken to carry the blue into the fornices of the vagina and to paint the lateral vaginal walls which protrude between the valves of the speculum. As the result of an application made in this manner, the entire mucous surface of the cervix and vagina and lower part of the vestibule is painted a blue-black color. This color largely disappears in from twelve to twenty-four hours. If there is an associated specific urethritis, a small cotton-wrapped probe saturated with the blue is carried by a gentle rotary movement to the mouth of the bladder, which viscus is not entered. Not more than two or three urethral applications in any one case have been required in my experience, and, as a rule, the ardor urinae ceases with or shortly after the first application. The night of the day of treatment the patient is instructed not to use her syringe; but on each succeeding day until the next visit she will use the syringe twice daily containing plain hot water, as hot as she can bear without discomfort. Two such treatments in a week will generally effect a cure in from five to six weeks. A practical suggestion which I always made to my patients is that they wear a vulvar pad in order to avoid staining of their garments.

It is not my intention to weary you with case-reports. In this connection I wish merely to state that while I have had many chronic and nasty cases requiring some perseverance and care in their management, I have yet to find one which has not ultimately yielded in every respect and come to a perfect cure. Probably the severest case I have encountered was that of a young governess in a family in Philadelphia who, after contracting the specific disease, had not visited a physician, but had placed herself in the hands of the Christian Scientists, who had given her both present and absent treatment for eighteen months without beneficial results. When she came to my office she was a mass of granulations

from the cervix to the vestibule, and so sensitive was she that I could not make even a vaginal examination. By cocainizing the vestibule and ostium vaginae I was able to introduce a pledget of cotton saturated with the blue by means of the dressing-forceps. This constituted the first treatment in that case. Two days later her sensitiveness was so far relieved that I introduced a small-size speculum and made the usual treatment. After six weeks' attendance at my office, or twelve treatments in all, the family removed to New York. Wishing to be certain that a cure had been effected I gave the patient a note of introduction to my friend, the eminent gynecologist of that city, Dr. J. Riddle Goffe. The following week I received a letter from Dr. Goffe stating that the patient had called to see him, but that as she was completely cured there was nothing left for him to do.

In conclusion, just a word as to certain complicating conditions. Not infrequently at the first visit of the patient there will be found an erosion, more or less marked, of the cervix uteri, especially upon the posterior lip. In a few instances, on lifting the cervix by means of a pledget of cotton held in the dressing-forceps, a raw surface will be disclosed in the posterior fornix of the vagina. All such spots wherever located are touched with 95 per cent. phenol, the excess being removed promptly by dry cotton, no alcohol being applied. If granulations exist in the cervical canal, as shown by bleeding after the passage of the probe, the phenol is applied to the canal from the internal os down, or if the internal os is patulous, from the fundus uteri down to the external os, and the excess removed by dry cotton. Two or three such applications are generally followed by a rapid formation of normal mucosa. The phenol eats away the unhealthy granulations and permits the ready access of the methylene-blue. In a very few cases even this will not answer, and it will then become necessary to curet the cervical canal under gas-anesthesia, after which the usual topical applications should be made.

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APPROVED METHODS OF VENEREAL DISEASE CONTROL*

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The advisability of venereal disease control is so well established that it is unnecessary to take up your time in a discussion of it in this paper.

I am quite sure no one will challenge the assertion that venereal diseases are more destructive to human life, health and happiness than any or all other infectious diseases.

Will any one say that control of diphtheria and scarlatina is unjustified? No. Then why not control venereal disease?

Measures for the control of venereal disease in Illinois and other States were adopted by the State health departments at the urgent request of the United States Government. The country was at war and was compelled to rapidly assemble an efficient fighting force. The experience of this and other countries in previous wars had shown the havoc wrought by venereal diseases, and for the first time in history a nation-wide campaign was launched against these diseases.

To stimulate action by State health authorities, the Chamberlain-Kahn Amendment to the Army Appropriation Bill carried an appropriation of Two Million Dollars for distribution to States passing laws or promulgating regulations having the effect of laws for the control of these diseases. Certain fundamental principles were stipulated but the details were left to the various State health officials to be worked out in a manner best adapted to meet local conditions.

Ordinarily, if the control of a new class of diseases were proposed, much time would be spent in a consideration of the measures to be instituted. Surveys would be made. The officers of State, district and county medical societies would no doubt be called in conference for a consideration of proposed measures. Such measures would be discussed in medical journals for months prior to their adoption, and, in the end, the measures adopted, the rules and regulations promulgated would, at least, be understood, if not concurred in, by the majority of the profession.

In the case of venereal disease control there was no time for such discussion. The country

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was at war, an army of young men must be protected against disease and venereal diseases were recognized as the most destructive of all diseases so far as efficiency was concerned. Consequently venereal disease regulations were prepared with more haste than has accompanied the preparation of regulations for the control of the other communicable diseases.

In some states laws providing for the control of venereal diseases were specially enacted. In others, department regulations having the effect of laws were promulgated under statutes authorizing State health officials to promulgate rules and regulations for the control of all infectious diseases.

A Department Regulation, having the effect of a law, is, generally speaking, more desirable than a law on account of its flexibility which admits of such changes as experience and expedience dictate from time to time.

In the control of venereal diseases, problems are encountered which are not met in the control of other infections. Recognizing this fact, and realizing further that venereal disease control must of necessity pass through an experimental stage, no attempt was made in Illinois to secure legislation directly bearing on this matter. Nor has it since been considered necessary or even desirable that such legislation be enacted, since it is conceded by medical men and laymen generally, that the control of venereal diseases is a necessity, and, since it is agreed that these diseases are infectious and communicable, why should special legislation be needed?

Is special legislation required in the control of smallpox? No. Then why in the control of gonorrhea and syphilis?

In the two years since the promulgation of venereal disease regulations, I have yet to hear one reasonable argument against the object aimed at in the Regulations.

Prior to the examination of men under the Selective Service Act we had no reliable information as to the prevalence of venereal diseases, but in view of the facts learned in these examinations the continuation of efforts to control venereal disease becomes one of the most important duties of the health officer. Since venereal disease control is established on a permanent basis let us consider the methods employed. Let us analyze or dissect them, criticize and dis-

cuss them. If they can be improved, let us improve them. If they are harsh or unjust let us make them right. Then when they are right let us all support them and let us in fact as well as in theory control and prevent the spread of these diseases which we all know are destroying the life, health and happiness of thousands of innocent sufferers in the State of Illinois year after year. Let us protect our sons against the diseased prostitute and our daughters against the uncured husband. Let us protect unborn babes against a life time of misery. Let us perfect our knowledge in the treatment of these diseases and let us not deride new remedies until we have learned the technic of their administration and have determined their worth or lack of it. Let us treat the venereally infected patient as if he were at least human and let us not drive him to the charlatan or the nostrum by our all too apparent disgust and indifference.

The first essential in the control of any infectious disease is to locate the disease, that is, make it reportable. Venereal diseases are no respectors of persons—they infect the rich and poor alike.

The object to be attained in locating a case of venereal disease is not to ascertain the identity of the patient, who is under proper treatment and is respecting the regulations as regards the exposure of others to infection, but to locate, and get under treatment, the source of infection—the disease spreader. Consequently the plan of reporting by key number was evolved. The attending physician is better able to judge the reliability of the patient than is the Department of Public Health and he is permitted to report such patients as he deems reliable under such key number as he selects. Should the patient later discontinue treatment before his cure is completed, or if the physician has reason to believe that quarantine or other control measures are essential for the protection of the public, then the name of the patient should be reported so that the case may be followed up. The physician should deliver to the patient a circular of information containing the rules and regulations. The patient should be made to understand the regulations and that in naming the source of his infection he is contributing toward the protection of the public.

If in the opinion of the physician the delivery

of a report to a local official will amount to revealing the identity of the patient, the report should be sent directly to the State Department. This applies especially to small villages where the local health officer is a layman.

If the patient is a food handler he must discontinue his employment during the period of his infectiousness. An Illinois statute expressly prohibits the employment of persons infected with a communicable disease as food handlers.

Druggists are required to report the names of purchasers of remedies commonly employed in the treatment of venereal diseases, the object being to render unpopular the self treatment of venereal diseases.

Venereal disease control will not be successful so long as patients continue to treat themselves with nostrums and prescriptions passed from one to another. In the absence of authority sufficient to compel the druggists to discontinue the sale of this class of remedies, we must be content with securing their voluntary co-operation. Approximately 2,000 druggists in Illinois have agreed to discontinue the sale of venereal disease nostrums. Within the past few days the Adams County Medical Society has passed a resolution endorsing the Illinois Regulations for the control of venereal diseases and calling upon all members to discontinue dispensing to venereal disease patients and write prescriptions. The Quincy Retail Druggists' Association has passed a similar resolution endorsing the Regulations and calling upon all its members to discontinue the sale of venereal disease nostrums and remedies commonly employed in the treatment of venereal disease except upon a physician's prescription.

Venereal disease patients, more than any other class, are constantly changing from one physician to another; therefore, it is necessary that some provision be made which will allow a change of physicians without exposing the identity of the patient to the public. The Regulations provide that when a patient who has been under treatment with Dr. A consults Dr. B, Dr. B shall immediately notify Dr. A that the patient is now under his care and obtain from Dr. A the key number under which the case was reported. Upon receipt of such notice Dr. A reports the change of physicians to the local health officer and Dr. B reports the case under the case or key number originally used. The fact that patients have

heretofore been given too little information concerning the nature of gonorrhea and syphilis, and the time required for successful treatment, is undoubtedly responsible for this tendency to drift from one physician to another. The circular of information delivered to patients and the general educational work which is being done are designed to overcome this tendency.

To protect the patient against extortion by the unscrupulous physician, the advertiser and the charlatan, it is provided that any person who may suspect that he is being continued under treatment an unnecessary period of time, or who has been threatened that his identity will be revealed if he discontinues treatment, may appeal to the local health authorities or the State Department of Public Health for examination and advice.

If we are to succeed in the control of venereal diseases it is necessary that all known cases receive adequate treatment. Every person with a venereal disease is not only a victim needing individual relief but is a disease carrier and a disease spreader. For the protection of the public, therefore, it is necessary that treatment be provided for those who are unable to pay for it. If treatment is denied them an account of their inability to pay, the public in the end pays the bill, which is much greater than if treatment had been provided in the beginning. To meet this condition, it is provided that upon being advised of a case of venereal disease in any person who is unable to pay for the necessary medicines, medical attention or hospital care, local health authorities shall report the case to the overseer of the poor, who shall supply such medicines, medical attention and hospital care. This provision works satisfactorily in some counties but in the larger cities it is almost a necessity that free clinics be provided.

To be successful and satisfactory to all concerned, it is necessary that clinics be operated in such a manner as not to pauperize the public nor infringe upon the legitimate practice of the physician. It is necessary that physicians and other attendants be paid a just and proper fee for services rendered. It is also necessary that the financial condition of the patients presenting themselves for treatment be investigated in order that those able to pay a physician shall be com-

pelled to do so. This plan has been followed in Illinois and very few complaints are now being received from physicians against the operation of clinics for the treatment of venereal diseases.

Provision is made for the isolation, control and quarantine of such cases as cannot be controlled in any other way. Quarantine regulations are almost identical with those used in the control of other infectious diseases. In the case of venereal diseases, however, it is very seldom necessary to placard, since a mere sight of the placard usually induces the patient to submit to control.

It is an exceedingly difficult matter to determine when a patient is cured of gonorrhea. The Regulations provide that in the case of females, cases shall be kept under control and treatment for a minimum period of one month and thereafter until three consecutive negative smears, taken at intervals of not less than twenty-four hours, shall be obtained from the cervix, vagina and urethra. In the case of males all cases are to be kept under control and treatment for a minimum period of one month and thereafter until three consecutive negative smears, taken at intervals of not less than twenty-four hours, are obtained from the urethra following massage of the prostate. It is provided that cases of syphilis be kept under control and treatment for a minimum period of one month and thereafter until all lesions of the skin and mucous membrane have healed and a negative Wassermann reaction is obtained.

It is a recognized fact that in many cases a negative Wassermann is never obtained and the Regulations provide for a special ruling in cases showing a persistent positive Wasserman after a reasonable period of time. •

It is provided that cases of chaneroid be kept under control and treatment until all lesions have healed and a negative Wassermann is obtained.

It is provided in the case of prostitutes, male and female, quarantine shall not be terminated except by order of the State Department of Public Health. This provision was made necessary on account of the discovery that certain cases had been released from quarantine after only ten days of treatment.

It is provided that no physician shall issue

certificates of freedom from venereal disease to any person known to be or suspected of practicing prostitution. In a certain Illinois city 68 per cent. of seventy-five prostitutes examined were found to be venereally infected. Of the infected prostitutes over twenty had certificates of freedom from venereal infection signed by licensed physicians.

The Regulations provide that when a venereally infected person wishes to remove from one health jurisdiction to another, he must obtain a removal permit from the local health officer in the health jurisdiction from which he wishes to remove. This form is to be forwarded to the health officer in the health jurisdiction to which the person is removing at least twenty-four hours prior to the hour set for beginning of travel.

Persons violating venereal disease regulations subject themselves to a fine of \$200 for each offense or to imprisonment in the county jail for a period not to exceed six months or both.

The experience of those actively engaged in the control of venereal diseases leads to the conviction that physicians by their indifference or disgust are partly responsible for the fact that only about 40 per cent. of the venereally infected have been receiving proper treatment at the hands of reputable medical men. Let us mend our ways. Let us study gonorrhea and syphilis. We know the causes. Let us cure them. Let us attend venereal disease clinics and study new and improved methods of treatment. Let us avail ourselves of laboratory facilities to perfect our diagnoses and check the results of our treatment. Let us treat venereal diseases as diseases and the venereally infected as we do other patients and not as contemptible criminals. Let us explain to them the dangers of venereal disease and the necessity for proper and prolonged treatment. Let us manifest a human interest in the patient and thus retain his practice. Then we shall find that venereal diseases are interesting and that the work is lucrative.

Venereal diseases have been too long neglected. State institutions for the care of the insane and feeble minded and the blind are overflowing with human wreckage as a result of this neglect. The public is rapidly awakening to the importance of venereal diseases and is demanding better treatment. Let us be prepared to meet this demand.

A PLEA FOR THE RECTAL EXAMINATION IN LABOR*

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Since the epoch-making studies on puerperal infection and contagion by Oliver Wendell Holmes and Semmelweis some seventy years ago, there has been a continuous and world-wide advancement toward an aseptic technic that surrounds the expectant mother during labor, with the results that literally myriads of women have been saved from death and many millions have been saved from more or less invalidism, the results of childbirth. We have learned that puerperal infection is a wound infection of the genital tract, and that during labor there are unavoidable, inevitable wound injuries of the birth canal made by the passage of the child. The possible infection, contact infection, of these wounds before, during or immediately after labor concerns us for, "this infection from without—exogenous infection—is by far the most common and is always first to be thought of when a puerpera develops fever." This contact infection is made by the most common carrier, the accoucheur or the midwife.

That there is a crying need for the practice of better obstetrics and primarily for better obstetric asepsis is shown by an examination of the United States Census Reports and other maternal mortality reports of recent years. In a paper by Dr. J. B. De Lee on this subject read before the New York Obstetrical Society in 1917, in which he made a careful critical study, he says as follows:

In the year 1914 there died during childbirth in the United States 10,518 women. Of these, 4,664 died of puerperal septicemia. To these must, in my opinion, be added most of the 378 deaths from "phlegmasia dolens, puerperal embolism, and sudden death," as given by the United States Census Reports for that year, since it is fairly certain that these diseases are practically all due to infection. In round numbers in a registered area of 66.8 per cent., 5,000 women are reported dead of puerperal infection in one year in the United States. On this basis it is safe to say that in the total area of our country 7,000 puerperae die each year of infection, without taking into consideration the large number of women who through negligence or direct concealment of their medical attendants are buried under another diagnosis. Then, too, we do not reckon the postponed mortality, the results of permanent disease acquired in childbirth, or from operations per-

formed later for the relief of such diseases. Only a few examples need be mentioned; heart disease from endocarditis in puerperio; urinary obstruction—death from surgical kidney; uremia from nephritis after puerperal infection; death from operation for pus tubes or adherent displaced uterus following a peritonitis, where death may be months or years after the primary infection. Taking everything into consideration I feel sure that the statement cannot be contested, that 8,000 women die annually in this country from puerperal infections.

While the mortality is great, the resulting morbidity is far greater. I believe you will not disagree with me when I say that where one woman dies of severe puerperal infection, five live. If you admit this, then 35,000 cases of puerperal fever occur every year in the United States. Furthermore, without doubt many thousands of mild cases of puerperal infection occur. The woman has a slight rise of temperature often lasting but a day or two. There may be only a little pelvic pain and the evidence of illness may be insignificant, but the anatomic traces of the infection are found in the pelvis. Thus in America hundreds and thousands of women become more or less life-long invalids from the infectious process acquired in the puerperium.

C. S. Bacon in a careful study of such records of the health department of Chicago as were obtainable in the forty years ending in 1896, showed a maternal mortality of 12.75 per cent. of all women dying between the ages of twenty and fifty years. Williams of Johns Hopkins regards the vital statistics reports of the health offices of the various American cities as grossly inaccurate and understating the true frequency of puerperal infection inasmuch as the vast majority of deaths from this disease, outside of hospitals, are returned as due to malaria, typhoid, pneumonia or other causes.

These conclusions are confirmed in a recent report issued by the Children's Bureau of the Department of Labor in Washington. In this survey presented by Dr. Grace L. Meigs she endeavored to answer these questions: What was the death-rate from childbirth in the United States and was this death-rate falling, with these conclusions:

It is evident that the figures of the number of deaths and the death-rate from childbirth, particularly from puerperal septicemia, while truthful as far as they go, give a gross underestimate of the actual conditions. Available figures give no evidence of a decrease in the childbirth death-rate in that part of the United States for which we have records during the twenty-three years from 1890 to 1913. During the thirteen years from 1900 to 1913, while childbed mortality rates were steadily rising, the death-rate from certain other preventable diseases, as typhoid, diphtheria and tuberculosis, showed an enormous decrease.

*Read before the Chicago Medical Society, Oct. 22, 1919.

It is a significant fact that childbirth is a greater hazard to women of child-bearing age today than any disease except tuberculosis. The figures further demonstrate that the whole question of the better protection of women during pregnancy and at confinement is a question of public health protection of the greatest importance. It is surely a question which has never received its proper measure of interest from the public or from the medical profession in general. These figures cannot be cited as an arrangement of the physicians of this country, though it is actually true that many women lose their lives because of the lack of proper obstetric training of physicians.

Emmons of Boston reviewing this subject declares, "that high infant mortality goes with a high maternal mortality, that these surveys of health reports are pointing the finger at child-bearing as the largest factor in the waste of life and health, that such evidence as is presented seems a challenge to the medical profession, that while the causes are many, both social and medical, one of the most potent is the lack of concentrated effort by the medical profession, and that the duty to lead lies with the obstetrician."

Surely these are astounding statements. They constitute a reproach to our present-day methods. They should spur us to a consciousness of our responsibility and our duty to practice and teach better obstetrics and to acquaint the public with its corrective obligation.

As it has been by the intelligent efforts of the obstetrician that the maternal mortality and morbidity rates from infection have been reduced, so it must be through him that this preventable disease shall indeed be prevented. Prophylaxis plays a vastly important part in this disease and since so little can be accomplished by treatment once the virulent infection has invaded the pelvis, and so much can be done by prevention, it behooves us to concentrate all our efforts on the eminently aseptic conduct of labor. It is not the purpose of the writer to dwell at this time upon other very important prophylactic measures to be insisted upon during pregnancy and labor, but it is his purpose to devote himself to the consideration of a single measure for the prevention of infection of the unavoidable wounds of the genital tract. Besides applying a thoroughgoing knowledge of the principles and practices of asepsis and antisepsis in a proper technic at childbirth, it is well to consider the refined aseptic measures of the modern bone surgeon. Who of us has not noted with admiration the very definite and painstaking efforts of the surgeon in keeping the wound and the bone trans-

plants absolutely free from contact even with his rubber gloved fingers for fear of the slightest wound infection which experience has taught him defeats the success of his operation. While it is good surgery to limit the size of the operative wound and to avoid injuring the tissues, it is far more important that the wound, whether large or small, shall not become infected. The aseptic wound is a local affair while the infected wound, however small, may become an immediate danger to the whole organism.

It is both interesting and instructive to be briefly retrospective, to observe the advances in the years gone by, to have seen numerous definite movements all in the same direction, toward an improvement in our aseptic conduct of labor. We have seen the so-called prophylactic antepartum vaginal douche first cautiously used, latterly looked upon with suspicion, and then discarded. We have seen the antiseptic and aseptic preparation of the external genitalia good but insufficient. We have seen antiseptics on the cleansed hands, unprotected by gloves, insufficient. Then we have seen the advent and use of sterilized rubber gloves mark a great step forwards, and lately, with an appreciation of the truth, we have been cautioned to limit the number of vaginal examinations down to an irreducible minimum, and lastly we come now to the conclusion that the vaginal examination with all the most modern rules of asepsis carefully followed out is still a distinct and direct source of danger to the parturient woman, because in spite of every aseptic and antiseptic measure observed it is impossible to disinfect the vulva thoroughly. Therefore, it must inevitably happen that bacteria are carried into the vagina at each examination. Implanted upon the wounds in the birth canal wound infection and puerperal fever result. Therefore, to reach the peak of an aseptic conduct of labor we should avoid invading the vagina for pelvic examination in labor and substitute for it the rectal route.

To Ries and Krönig is due the credit for first recommending the rectal in place of the vaginal examination in labor. Their recognition of the value of this procedure in 1893 remained unnoticed and unappreciated until very recent years when the use of rubber gloves became general and the rectal examination for pelvic exploration then became popular with the leading obstetricians.

At first this method was employed simply to determine the advancement of the head in the pelvis, but gradually with increasing experience its field of usefulness has broadened, and now it has become a recognized method of obstetric examination.

The modern maternity hospital has rendered signal service in reducing the maternal and fetal mortality from sepsis almost to zero, but there still remains a definite morbidity rate to be eliminated by stricter safeguards. It is in the private home, however, where the great majority of all births occur and there it is that the lying-in chamber must be considered septic, lacking as it does in every means, appliance and convenience for aseptic labor. There slips in asepsis are bound to occur and there the simple intensive system of asepsis should prevail. The difficulty of sterilizing the skin area immediately around the vulva and of maintaining the parts sterile throughout labor is apparent to every physician. Therefore, we must aim in the private home as well as in the well-equipped birth-room of the most modern maternity hospital to prevent access of bacteria from without. By restricting the internal examination and conducting the labor by external and rectal examination and observation of its course we avoid carrying the infective bacteria into the vagina, into the uterus, and into the tissues.

In actual practice 90 per cent. of all normal labors can be conducted without a vaginal examination. The routine pelvic measurements have, of course, been taken during pregnancy and the patient goes into labor with the diagnosis of presentation and position determined by external or abdominal palpation. Therefore, no vaginal examination is necessary. The fetal heart action is watched by frequent auscultation. The rate of progress of labor can often be measured by external signs and to intelligently follow the course of the labor, pelvic exploration by the finger in the rectum gives all the information desired. The degree of effacement, the size of the dilating cervix, the degree of engagement of the presenting part, the presence or absence of the pouting bag of waters, the presence of the fore-lying or prolapsed cord, placenta praevia, abortion in progress—all these and more can be determined.

The technic of preparation for rectal examination is infinitely less complicated than for vaginal

examination. The sterile rubber glove is slipped on and anointed with a sterile lubricant and the exploration made. The presenting part is pressed down by the external hand above the symphysis. After some experience one becomes very proficient and the educated finger is soon able to determine the pelvic obstetric findings quite as definitely as by the vaginal route. With the softening and relaxation of the sphincter ani and levator ani during labor the finger meets little resistance and causes no pain. Exceptionally where the examination per rectum is unsatisfactory or indefinite or inconclusive as in breech or face cases, a vaginal examination after proper aseptic preparation should be made. In the writer's experience it is a rare thing to make a vaginal examination in a normal case and often in spontaneous labors the course is satisfactorily watched throughout by abdominal examination alone or combined with rectal exploration.

In operative cases, such as one requiring forceps, the progress of the labor is followed by the rectal finger and only just before the application of the forceps and after thorough aseptic preparation is the vaginal examination made. Furthermore, by means of the routine rectal examination the vagina is not invaded and a pubiotomy or a late Cæsarean section may be done without fear of a preliminary infection by a previous vaginal examination.

At the Chicago Lying-in Hospital internes watching labor cases are directed as follows:

Insert the lubricated gloved finger gently as far as it will go. Examine as follows:

1. Head or breech? Or what?
2. Position of presenting part?
3. Is presenting part engaged?
4. Where is the cervix? How much effacement and dilatation?
5. Is the bag of waters ruptured?
6. Is the cord prolapsed or are there other anomalies present?
7. If head is not engaged why is it not? (Contracted pelvis? tumor? scars? placenta previa?)

Caution: Do not handle rectum roughly and be careful in palpating tumors as you may push your finger through into the vagina. Record findings on labor record immediately after examination and report to physician in charge in private cases.

At the Chicago Lying-in Hospital Dispensary where thousands of patients have been confined in tenement homes the attending obstetricians, internes and students all use the rectal examination in labor, learning and applying this method with ever increasing facility and expertness, and

with a definite and demonstrable reduction in incidence of subsequent temperatures as compared with a previous period of years when the vaginal examination was permitted?

Practice with this method makes for efficiency. The educated finger soon becomes skilled and gives most accurate information. This route is so easily tried out and has so many points to its credit that those who have become proficient in this procedure predict its general adoption.

The advantages of this method are:

Rectal examination combined with abdominal palpation in pregnancy and labor is an efficient substitute for vaginal examination and is compatible with the intelligent management of childbirth in 90 per cent. of all normal cases.

Rectal examination before, during and after labor as well as in miscarriage and premature labor marks a distinct advance in the prevention of puerperal infection.

Rectal examination may be repeated at frequent intervals without the slightest harm to the patient, while the repeated vaginal examination in the light of modern aseptic management is to be condemned.

Rectal examination is more easily done and with the least preparation of the patient when the examiner wishes to determine whether the patient is in labor, and if it is safe for him to leave or necessary to remain at the bedside.

It is a time saver.

It is practically painless.

In borderline cases where Caesarean section is considered it presents the advantage of an uninvaded vagina.

The obstetrician who examines by the rectal route enjoys a justifiable peace of mind and freedom from censure if his patient subsequently develops fever.

CONCLUSIONS

In view of the tremendous annual death-rate from puerperal sepsis, a preventable disease, and a five-fold greater morbidity rate, the medical profession must fairly face the facts and preach and practice and teach those methods that are known to demonstrably lessen the dangers to the child-bearing woman.

All authors now agree that more harm than good results from vaginal examination.

If infection is not carried into the vagina the patient will not be infected.

The danger of puerperal infection is in direct

proportion to the number of vaginal examinations and the lack of an aseptic environment.

To the purpose and end of definitely diminishing the incidence of puerperal infection the rectal examination is most heartily and earnestly recommended to replace the vaginal examination in labor, it having nearly all the advantages and none of the disadvantages of the latter.

Every physician attending labor cases should neglect no opportunity to perfect himself in the method of rectal examination, and control his rectal findings by vaginal examination, if necessary.

The rectal route for pelvic exploration in labor should be taught in our medical schools and practiced in every maternity. Particularly in private practice in the home it should be the examination route of first choice and should be given an intelligent, thorough and honest trial.

Practical experience justifies the claim that the general use of the rectal examination before, during and after labor will cut down the incidence of puerperal infection, thereby saving the lives of thousands of mothers.

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THE IMPORTANCE OF A ROUTINE EXAMINATION OF THE DUODENAL CONTENTS IN SELECTED CASES

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This paper is a plea for the more frequent examination of duodenal contents. The symptoms in the class of cases in which this would be useful are sometimes so vague that anything that will give a new angle of approach or check up on symptoms already found, will be welcomed by the profession.

Duodenal examination is nothing new, nor is it more useful than other measures, but we believe that it should take its place in the routine examination along with gastric analysis, x-ray and examination of feces. It is not necessary to make an examination in every case that comes to the office; neither is it necessary in every case to make an x-ray or examine the spinal fluid. So we believe that in selected cases, cases where it may help out the diagnosis, it should be done as a routine practice. In other words, we do not want to become slaves to a method, but to use judgment and decision.

It has been only a few years since the first successful apparatus was devised for the removal of duodenal contents by means of the duodenal tube. Helmeter of Baltimore, in 1895 and 1896, was probably the first. His methods were crude and unworkable. It was not till Gross (4), in May 1909, Einhorn (5) in November 1909, and Palefski (6) in 1911, improved the apparatus and the technique, that the procedure became practical and applicable to the work of the clinician. The importance of this work—the invention of the duodenal tube and the other duodenal apparatus—must not be underestimated, as it opens up a new field for investigation in a hitherto unexplored and inaccessible place. Formerly the clinician was not able to tell anything about the food after it left the stomach, or about the intestinal secretions, secretion of the pancreas or bile, until it was recovered in a decomposed state at the end of its course. Now it is an easy and practical way of collecting data and even aiding in making a diagnosis.

Someone has said, what practical thing can be found out by the examination of the duodenal contents? We have only to remember what the duodenum is and what it contains, and then answer the question ourselves. It is the chamber that collects the contents of the stomach and gall bladder, the secretion of the pancreas and liver. It is that portion of the intestine most commonly affected by ulcers. It is the place where the acid from the stomach is neutralized and made alkaline with the formation of gas, which mingles with the food. It is the portion of the gut nearest the liver where we may draw off bile just as it leaves the gall-bladder or the hepatic duct. It is here that we may get samples to test the enzymes of the pancreas in their pure state before they are mixed with food. Also it is here that, the almost overlooked subject of the bacteriology of this portion of the intestinal canal, can best be studied in regard to typhoid carriers, cholecystitis and acute pancreatitis, and last, but not least, it is here that we can get a sample of the finished product of gastric digestion.

One other thing of great importance is the patency of the pylorus. By skill in the use of the duodenal instruments we can tell almost its exact size. This instrument consists of a pneu-

matic bag placed in the pylorus, the amount of dilation indicates the size of the lumen.

In the selection of duodenal instruments we have to use care. I have not found an instrument suitable for all cases. The outlet of the stomach and the inlet of the pylorus involve the same principle as the pelvic canal. It is not a straight line. To pass the bulb of the instrument through, rotation must be accomplished. The long axis of the bulb has to be commensurate with the size of the opening and the inlet of the canal. It is plain that if the bulb rotates in the wrong direction the lumen of the tube will be blocked and the passage is useless, unless we wait for the tube to straighten itself far down in the intestinal canal. The ideal tube is one you can pass the easiest, get your samples the quickest and with the least discomfort to the patient; such an instrument has not yet been devised. I believe that the best results can be obtained by a glass smoothed tube, No. 7 American, with an Einhorn or modification tip. The Rehffuss tube is too large and the long diameter of the bulb is too great. Why this is true will be explained when we speak of the technique. The Gross instrument is too large. The Palefski instrument does not have the proper relation between the long and short axis of the bulb. An instrument to be used successfully must be adjusted within a reasonable time. I have no sympathy with the method of passing the tube at night and removing the contents the next day. I think it is best to make fractional samples as the tube passes down. We sometimes remove samples 150 to 200 cm. from the teeth to determine intestinal digestion.

The technique of passing the tube into the duodenum is simple. The patient should be sitting up, the bulb of the tube is placed well back into the throat by the physician and the patient told to swallow. At the same time the physician pushes the tube farther and farther into the gullet. No water is needed or should be used. As soon as 20 cm. is reached (the tube must be graduated) the patient is placed on his right side, slightly forward, with buttocks high and instructed to gradually push the tube in about an inch every three minutes. The bulb finds its way along the lesser curvature of the stomach without doubling up the tube on itself. In this

way the short axis of the bulb will be guided into the inlet of the pylorus. If the bulb strikes the fundus of the stomach it will take it hours to be brought up to the inlet and adjust itself to the axis of the outlet. Not infrequently in this way a loop of the tube is passed through before the bulb, thus causing a kink in the tube and make the whole procedure useless. The Rehfuß tube is too stiff and will frequently strike the fundus. Some of the other tubes are delayed by the size of the bulb. A sample of the stomach contents may often be removed at 40 cm. on the tube. At 50 cm. the tube is engaged in the pylorus. Beyond that you reach the duodenum. A syringe is better than a bulb to attach to the tube to withdraw the contents, or a still better method is to allow the fluid to siphon out.

A simpler method may be preferable for the general practitioner. Pawlow⁸ found out that if he administered oil to dogs having a gastric fistula, within a short time he was able to obtain an emulsion in the stomach of bile and pancreatic juice which was regurgitated from the duodenum. Boldyreff⁹ and Levinsky¹⁰ have advocated the making use of this fact in obtaining a sample of duodenal contents for examination. Half a teaspoonful of magnesia usta is given twenty minutes before the oil, usually olive oil, and a second dose twenty minutes after, to neutralize the acidity of the stomach contents. In three quarters of an hour the stomach tube is passed and the contents removed. The oil is then separated from the greenish yellow fluid by means of a separating funnel, and this fluid can then be examined for its bile contents and enzymes. By this method however, the duodenal contents are mixed and diluted with stomach contents and a sample as it is normally in the duodenum cannot be obtained.

It is necessary to know the normal findings before we pass to the pathological. The first sample at the pylorus is stomach contents and no bile, unless there is regurgitation. The next sample beyond the pylorus is yellow with bile, frothy from the evolution of CO₂ gas and highly acid. A little distance beyond at the Papilla of Vater, on a fasting stomach the content is golden yellow, not frothy, alkaline about 20 titrated with methylorange and decinormal hydrochloric acid

solution. It also contains the pancreatic fluid, some mucus and no food. The microscope shows the usual findings of bile and a few bacteria. We have to remember that this is a mixed sample of duodenal secretion, bile, pancreatic juice and maybe stomach contents. But they are fresh⁷, yet unmixed with food and may be examined just as they come from the glands.

The pancreatic secretion contains a milk ferment differing from the stomach ferment in that it will not coagulate boiled milk—it will not coagulate in an acid media and it takes 30 to 60 minutes while the rennin in the stomach takes only 5 minutes to coagulate milk.

The three digestive ferments coming from the pancreas are according to the Einhorn scales, in the following proportions, amylopsin 6mm., steapsin 3.5 mm., trypsin 2.8 mm. According to the methods of simple analysis they are present in marked quantities. .

In pathological samples we find many deviations from the normal. Frequently it is greenish in color or brown, or almost black, turbid—containing many bacteria, yeast cells, broken down epithelium and blood from ulcers, granular deposits from the gall-bladder and even small fragments of stones. The enzymes may be easily studied and checked with the normal. If either one or the other is absent or weak in quantity, we may have an intolerance for some particular class of food with the resulting symptoms. If there is an acute inflammation of the pancreas there may be an increase of enzymes; if there is a decrease of enzymes there may be a neoplasin in the head of the pancreas. Cholecystitis may be recognized or suggested by the character of the bile, especially if it is extracted by slight pressure over the gall-bladder. It is also quite probable that when the bacteriology of this portion of the intestinal tract is fully known it will clear up some of the secrets of our profession.

I shall report a case of cholecystitis and cholelithiasis where the symptoms are so typical and so plain that there could be no mistake made in the disease. The use of the duodenal tube was not necessary to establish the diagnosis. We passed the tube and withdrew the contents of the duodenum merely to study the secretions under such conditions.

Case 1. The patient called me up and arranged to come to the office the next day for, as she termed it—"a bad stomach." Before the time she was taken ill with a light chill, fever 103 and severe lancing pains in the right hypogastric region. She was severely constipated, the pain lasted 6 hours and the fever 36. She was weak and very sore on the right side. Later she came to the office. She was 40 years old; weight 117½ pounds, normal weight 130 lbs.; had three children. She had not menstruated for nine years. At that time an operation had been performed; she did not know what had been done.

Family history: Father died of sun-stroke; mother of tuberculosis; brothers and sisters well except one had gall-stones.

Personal history: She had the diseases of childhood; never had any other sickness. Operation for "female trouble" she said nine years ago. She had ten years ago a severe attack of gall-stone-colic with severe pain on the right side; lasted one day. Two years ago she had a similar attack with obstinate constipation, no fever. She has been yellow at each attack.

Physical examination showed nothing abnormal except that there was a severe tenderness in the right gastric region.

Blood, urine and stomach analysis showed no pathology.

One-half hour after inserting the duodenal tube the sample showed that it was engaged in the pylorus. The next sample showed an acidity of 30, very dark, dirty yellowish brown, almost black, thick ropy with mucus. Pancreatic secretion was normal. Microscopic examination showed many bacteria, yeast cells, epithelium from the gall-bladder and a dark biliary deposit. A third sample showed same findings except the acidity was reduced to almost neutral.

This no doubt was an exaggerated case, however, we find all grades between normal secretion and this in unsuspected cases of gall-stones or cholecystitis where a routine examination of the duodenal contents will clear up the diagnosis.

Case 2: A school girl, aged 11 years; weight, 96½ pounds; height, 4 feet, 11 inches.

Family history: Negative.

Personal history: Had measles, mumps and chicken-pox, no other sickness.

History of present trouble: Mother brought her to the office because she had a stinking stool and a "severe stomach ache." On questioning the patient, I found that she had a diffuse crampy pain over the lower part of the abdomen and especially on the left side, beginning one-half hour before eating and occurring several times during the week. She was not constipated; bowels moved once a day.

Physical examination showed that her tonsils had been removed; teeth in good condition; tongue badly coated; very slightly tender in the epigastric region. All other physical conditions normal.

Examination of the feces showed no parasites; very foul condition; undigested foods of proteid and starch composition; much indol and skatol present.

Examination of the duodenal contents showed golden yellow fluid; alkalinity, 30; microscopically, no pathology; the pancreatic enzymes according to the Einhorn tubes showed amylopsin, 1½ mm., steapsin, 2 mm., trypsin, 2 mm. This showed the normal amount of steapsin and trypsin, but only quarter the normal amount of amylopsin.

Diagnosis: Intestinal dyspepsia caused by undigested starchy foods.

Her diet was very carefully regulated, no medicine given; the pains have not recurred in several months' time and the stool has become normal.

In this case she had evidently bolted her food and, as the amylopsin was largely deficient, her digestive apparatus did not utilize the starchy foods. It therefore fermented in the intestinal tract. To make up for this she had evidently developed an enormous appetite and ate more than she could assimilate. Without the examination of the duodenal contents the physician could have easily been led astray in both diagnosis and treatment.

I do not consider the Einhorn tubes for testing the pancreatic ferments practical for the average physician, as they are bunglesome and tedious, yet they are probably the best means at our disposal at the present time.

In conclusion:

1. The examination of the duodenal contents opens up a field for investigation in a hitherto unexplored and inaccessible place.

2. The duodenum is the chamber that collects the contents of the stomach, liver, pancreas and gall-bladder.

3. It is here that we may get samples fresh from the pancreas and liver unmixed with food to test the functions of the glands.

4. The infections of the pancreas and gall-bladder and also typhoid carriers can be studied best by means of the duodenal tube.

5. We believe that the use of the duodenal tube is as necessary to establish a correct diagnosis in selected cases as is the stomach tube, the x-ray or the examination of the urine.

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EXAMINATION OF THE FECES

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The diagnostic value of clinical analysis of the feces is not generally appreciated. In its passage through the digestive canal food is reduced by various chemical and bacterial transformations until it is ultimately reduced to waste products destined to be eliminated from the body as useless or injurious. These final metabolic products together with other products of oxidation are or should be expelled from the body as fast as they are formed. The fecal mass varies widely in different individuals according to the character of the food and the habit of going to stool.

Composition of the Feces. Feces are derived from several sources, namely:

1. The unchanged residue of animal or vegetable tissue used as food; such as hairs, horny and elastic tissues, most of the cellulose, woody fiber, spiral vessels of vegetable cells and gum. Proteins are never found in the feces with a moderate diet.

2. Portions of digestible substances, especially when these have been taken in too large amount or when they have not been sufficiently broken up by chewing, portions of muscular fibers, ham, tendon, cartilage, particles of fat, coagulated albumin, vegetable cells from potatoes and other vegetables, raw starch, etc. All foods yield a certain amount of residue, as, for example, white bread, 3.7; rice, 4.1; flesh, 4.7; potatoes, 9.4; cabbage, 14.9; yellow turnip, 20.7 per cent. Some fat is nearly always present in the feces in the form of fatty acids, and to a small extent as calcium or magnesium soaps. The amount of fat found depends upon the amount of fat ingested and upon the amount of bile secreted.

3. Products of intestinal secretion, namely: cholestrin probably derived from bile, urobilin or stercobilin derived from the bilirubin (pigments) of the bile and other decomposed products of bile pigments, which do not now yield the Gmelin reaction (nitric acid test), as well as the altered bile acids. The reaction, however, may be obtained in pathological stools. Biliverdin, glycolic and taurocholic acids occur in meconium.

4. After a milk diet and also after a fatty

diet, crystalline needles of calcium combined with fatty acids and chalk (soaps), constantly occur, even in the sucklings, and even unchanged masses of casein and fat occur during a milk cure.

5. Among the inorganic residue, soluble salts rarely occur in the feces, because they diffuse readily, among these being common salt and other alkali chlorides, the compounds of phosphoric acid and some of those of sulphuric acid. The insoluble compounds—of which ammonia comagnesic, or triple phosphate, neutral calcium phosphate, yellow-colored lime salts, calcium carbonate and magnesium phosphate are the chief forms. Some of these insoluble substances are derived from the food, such as lime from bones, and, in part, they are excreted after the food has been digested.

6. Products of bacterial action. These comprise the entire series of fatty acids, from acetic acid to palmitic acid, farther, lactic acid, succinic acid, glutaric acid, leucin, tyrosin, hydro-paracimaric acid, paraoxyphenylactic acid, phenylpropionic acid, phenylacetic acid, phenol, para-cusol, indol, skatol, skatol-carbonic acid, ammonium carbonate, ammonium sulphide and conjugate glucuronates. These bodies impart the disagreeable fecal odor to the mass.

7. Micro-organisms in great quantities are present and often make up a considerable portion of the total fecal solids, the bacillus coli communis predominating; also parasites and their ova.

8. Mucus, detritus and epithelial cells. These cylindrical cells of the mucous membrane are sometimes almost intact. Blood, pus, gall stones, etc., are sometimes found.

9. Purin bases—guanine and adenine—which come directly from the food and also from the metabolism of the tissues. These are increased on a diet rich in purins (meat extracts and thymus), but are also found on a milk diet.

10. Water. The consistency of the feces varies with the water content, which fluctuates between 68 and 82 per cent. It depends less on the water drunk than on the vigor of intestinal peristalsis, the tone of the intestinal vessels and the state of the intestinal epithelium.

Gases. Gases developed within the digestive canal together with the air swallowed with the food and saliva are important factors in the process of formation of the feces. These gases

result from fermentation and putrefactive activities of the bacteria within the intestine. As this development of gases is due to decomposition of the foodstuffs, it follows that quantity and kind of gaseous mixture varies with the nature of the diet.

Oxygen of the swallowed air is rapidly absorbed by the blood through the mucous membrane of the stomach and is absent from the intestinal canal. Carbonic acid from the blood is also given up into the air of the stomach and partially mixes with the duodenal gases. Ruge analyzed the intestinal gases of man, as given off per anum as follows:

Gas	Milk Diet	Flesh Diet	Vegetable Diet
C.O. ₂	16.8	13.6	34
C.H. ₄	.09	37.4	44.5
H. ₂	43.3	3	2.3
N. ₂	33.3	45.9	19.1

Carbonic acid occurs in large quantities especially after a vegetable diet by

(a) Cleavage of carbonates, lactates, acetates and citrates;

(b) Alcoholic fermentation of glucose;

(c) Butyric fermentation of lactic acid;

(d) Diffusion from the capillaries of the mucous membrane of the intestines.

The hydrogen so abundant on a milk diet is due to butyric fermentation of lactic acid. Methane which is developed after a diet of meat and vegetables, originates in the decomposition of acetates and lactates and of cellulose. Nitrogen is always present, though it varies much in quantity with different diets.

Quantity of Feces. There is a wide variation in the daily quantity of feces eliminated, depending on the amount and kind of food ingested. Numerous attempts have been made to find the average composition of feces from a diet containing just enough protein, fat and carbohydrates to keep the body in normal condition. Subjects should be placed upon this test for at least forty-eight hours before a specimen is taken. The following is the diet of Schmidt:

Breakfast: Half a liter of milk and 50 grams of crackers.

Lunch (mid-forenoon): Half a liter of oatmeal gruel consisting of 40 grams of oatmeal, 10 grams of butter, 200 grams of milk, 300 grams of water and one egg, which is to be strained.

Dinner: 125 grams of chopped meat lightly

cooked, 20 grams of butter, 250 grams mashed potatoes, containing 10 grams of butter and 100 grams of milk.

Lunch (mid-afternoon): Same as breakfast.

Supper: Same as mid-afternoon lunch.

Even during an absolute fast a considerable amount of fecal matter is formed in man (Fr. Muller-Zeitschrift f. Biol. XX—1884). Human feces in fasting are yellowish brown balls, of medium consistency, with little odor, and resemble the feces of a flesh diet. Upon a flesh diet the feces are small in amount (140 grams) and dark in color, while upon an exclusively vegetable diet they are largest, amounting to 500 grams. On a mixed diet the feces of 24 hours weigh about 170 to 200 grams.

Vegetable foods are much richer in substances indigestible or difficult of digestion, so that larger quantities are taken to satisfy the needs of man and a larger residue is left in the intestine. An excess of diet alters the amount of feces. A superabundant meal, although it consists wholly of digestible substance, leaves more excreta because part of the meal escapes the action of the digestive enzymes and fails to come in contact with the absorbing surface of the intestine. On a mixed diet one-seventh to one-eighth of the ingested food is normally excreted.

Piansnitz (Zeitschrift f. Biol. XXXV, 1897) concludes that human feces with a few exceptions consist chiefly of excretory products of the intestine and not of the alimentary residues. The quantity of feces depends principally on the nature of the food, some kinds requiring more succus entericus for their digestion than others. It seems more accurate to differentiate foods into those which cause the production of much or little feces than to speak of foods which can be more or less assimilated. Stich (1853) was the first to note that fecal matters contain substances which have a toxic action on the living body. The unquestionable therapeutic value of purgative waters is due to their exciting the excretory function of the intestine.

Consistency and Form of Feces. The normal pasty or doughlike character of the human stools molded to the shape of the bowel as long sausage shaped segments or as a series of boluses closely massed together is dependent upon the amount of water present. A semi-fluid stool may be normal if the diet is largely vegetable. Very liquid

stools produced by laxatives are, of course, abnormal. Some diarrheal movements often stratify themselves, liquid constituents above and solid food below, but often the upper layer is only urine. Very hard stool (scybalum) indicates an abnormally long residue in the colon and excessive absorption of it including water, until the mass is evacuated as small balls like sheep dung, due to tightly packed fecal matter becoming friable. A large quantity of feces may stagnate in the rectum and distend it enormously. The lead pencil or pellet formed stool, popularly supposed to be due to rectal stricture, really indicates a spastic condition of the colon or a tight sphincter. Stricture of the bowel, unless situated in the anal canal, may be accompanied by a normal stool.

Frequency of Movements. Even among healthy individuals there is considerable variation in the frequency of bowel evacuations. Some people have several bowel movements each day and others, apparently just as well and comfortable, have but one movement in two or three days. There is no sharp distinction between what may be considered physiological and that which is pathological. The less frequent the evacuation the larger the amount eliminated at one sitting. Persons whose bowels move but once in several days will eliminate incredible amounts at a time; a half peck has been commonly recorded.

Constipation refers to infrequent movements which are not in proportion to the amount of food taken and in which the bolus is eliminated with difficulty. Constipation is associated with various chronic digestive disturbances, i. e., gastric dilatation, intestinal obstruction, and is also an independent disease due to one or more of several conditions.

Diarrhea. In diarrhea, due to disease of the lower bowel, the individual movements are not large, but very frequent, owing to the continuous reflex tenesmus.

Odor of the Feces. The obnoxious odor of human feces is largely due to indol and skatol, products of albuminous decomposition but made more disagreeable by methyl mercaptan, hydrogen sulphide and methane.

Reaction of the Feces. The feces are normally acid in reaction as a result of the acid fermentations of the lactic acid bacteria, which decom-

pose the carbohydrate foods, hence, the acidity is greatest on a diet rich in starchy and saccharine substances. A neutral reaction of the feces may occur on a diet rich in proteins due to the development of ammonia or the abundant secretion of mucus.

Color of Feces. The color of the feces varies considerably according to the nature of the food partaken. Contrary to the general opinion, the bile pigments have little influence on the normal color of the dejecta. Infant's stools are normally light yellow because they contain unaltered bilirubin. In adult life the feces vary in color somewhat according to the nature of the food, but on a normal mixed diet is of a light brown or dark brown color. On a milk diet the stools are light color. On a diet rich in fat they are yellow or clay colored. On an exclusive flesh diet, owing to the presence of hematin and ferrous sulphide, the feces are blackish, due to the action of sulphuretted hydrogen, which is always present in the bowel, on the organic compounds of iron contained in the food or in the secretions of the alimentary canal. The feces may be given a blood red color by raspberries, blueberries, blackberries and black cherries, or even an abundance of red wine. Food rich in chlorophyll (green vegetables) produce a green or olive colored feces. Starches tend to produce a yellow color. Drugs may affect the color of the feces. Calomel produces a greenish tinge, owing to its antiseptic action, which prevents the breaking of the bile pigment into urobilin and also by the sublimate derived from calomel, which changes the bilirubin into biliverdin. Bismuth, iron and manganese produce a dark brown or black colored stool due to formation of sulphides of these metals; a tarry stool which can be differentiated from the bloody (hematin) stool only by a chemical analysis. Methylene-blue given internally renders the feces blue when evacuated, but within a few minutes they change to bluish green.

Macroscopic Examination of the Feces. Many constituents may be observed macroscopically in the feces such as undigested particles of food, skins of berries, large pieces of connective tissue, woody vegetable fiber, undigested pieces of apples, pears, potatoes, grains of corn, flakes of casein, tomatoes. Various stony substances frequently appear in the stools. Gall stones, as

enteroliths, may be found following an attack of biliary colic or even without this association. They are important as an aid to diagnosis and should be carefully sought for by mixing the feces with water and then carefully washing it through a sieve.

30 North Michigan Avenue.

MUMPS MENINGITIS FOUND AT CAMP TAYLOR BASE HOSPITAL WITH AUTOPSY FINDINGS

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Mumps meningitis is of particular interest at the present time when large bodies of men are concentrated in various Army camps, and when the early recognition and true character of any meningeal disease is of vital importance to the Military Service. The text-books have taken but little recognition of this complication of mumps. Most of the standard works on medicine do not mention it at all, or content themselves by merely stating that this complication may occur. Thus, for example one of the newest and most widely read works mentions mumps meningitis in a single sentence, adding in a paragraph that the condition is never fatal. In this country mumps meningitis has been studied chiefly by George Acker and Julius Kaunitz. The latter points out that since most patients recover after a few days illness, it is very probable that the milder cases of meningeal irritation are probably not recognized and that this, very likely, accounts for the fact that so few cases are on record and that so little is known of this complication. It is likewise most probable that the incidence of this complication varies considerably in different epidemics; thus in our own epidemic of some 2,400 cases of parotitis, only two meningeal complications were recognized. Acker states that in 1,705 cases observed, there were 158 cases of meningitis, but that this does not give the true proportions, as many cases pass unnoticed. Massary, Tockman, and Luce found meningitis almost constantly in 635 soldiers afflicted with mumps, while Fiessinger reported five cases of meningitis in 41 cases of mumps. The reason for this wide variation of incidence may be due to observation, or, and this is more likely, due to the difference

in the virulence and invasive power of the virus causing meningitis.

Historical. According to Acker, mumps meningitis was first recognized by Hamilton in 1758, who recorded the death of a man aged 22, from meningitis complicating mumps.

Symptoms. The meningeal symptoms rarely precede the attack of parotitis but usually make their appearance two to five days after the parotid swelling. In some instances the meningitis occurs later. The onset and the course of the complications vary considerably, sometimes a moderate fever, headache, insomnia, and general discomfort mark the disease, but occasionally severe symptoms are present, such as sharp rise in temperature, rigidity of neck, Kernig's sign, pupillary changes, disturbances of sensation, involvement of cranial nerves, delirium, convulsions, muscular spasm, paralysis, and occasionally, cutaneous hyperesthesia.

Anatomic Lesions. But few autopsy records are present and detailed anatomic studies are rare since the disease appears to be of relative low mortality. Generally speaking, the changes found are lymphocytic and edematous meningitis associated with some encephalitis. The bacteriology of the disease is as yet obscure. A diplococcus has been isolated from the blood and the parotid gland, but apparently no organisms in the spinal fluid have been found, in mumps meningitis. Lately, M. Wollstein stated that mumps was due to a filterable virus with which she was able to produce the disease.

Diagnosis. It need hardly be pointed out that it is of vital importance to recognize early the true nature of any meningeal infection in an Army camp. The more common diseases that are sometimes accompanied by meningitis are epidemic meningitis, streptococcus infections, pneumonia, influenza, and tuberculosis. There are certain clinical symptoms more or less characteristic of each, but the final criterion lies in the examination of the cerebro-spinal fluid for cytology, cell count, and bacteriology, which are here of more diagnostic value than the chemical tests. The characteristics of the spinal fluid in the common types of meningitis may be grouped in the following table:

	Mumps	Tuberculosis	Influenza	Pneumonia	Streptococcus Infections	Epidemic Meningitis
Appearance on withdrawal	Usually clear	Usually clear	Cloudy	Turbid	Turbid	Turbid
Appearance after 24 hours.....	Fine white sediment	"Spider Web" or "Velum"	Yellowish white sediment	Heavy purulent	Very purulent	Heavy purulent sediment
Cell count.....	200	200	500	500	500	500
Cytology	Lymphocytes	Lymphocytes	Leucocytes	Leucocytes	Leucocytes	Leucocytes
Bacteriology	Sterile?	B. tuberculosis	B. influenza	Pneumococcus	Streptococcus	Meningococcus

It must be pointed out however, that variations from the above may occur. In this instance, it is of interest to note that Dopter states that in simple mumps, the spinal fluid is normal in cellular elements.

Case 1. B. K. H., Pvt. Cook's and Baker's School, Q. M. C., age 31, white. In service three years. Admitted to hospital February 21, 1918.

History: Family history and previous personal history unimportant. Claims that he has been in good health until age of 28, at which time he suffered from mumps.

Examination: When admitted to hospital both parotid glands were moderately enlarged. Temperature 99, pulse 80, respirations 22. No other organic changes. On the third day after admission patient appeared dull, and had not eaten his food. On the evening of the 24th, he was mildly delirious, and showed Kernig's sign. The following day delirium and Kernig's sign were more pronounced. First lumbar puncture; apparently clear fluid under pressure, unfortunately admixed with some blood. Examination showed globulin present, 260 cells per cmm. Second lumbar puncture, made during the night, showed clear fluid, 200 cells per cmm., differential count polymorphonuclears 40%, lymphocytes 60%. On the following morning, February 26th, number of cells 51 per cmm., globulin present. On the 27th patient was not quite as delirious and showed slight general improvement, but on the following day he became stuporous. Examination of the eye grounds showed double choked disc. Blood pressure, systolic 140, diastolic 80. Retention of urine. Lumbar puncture gave 130 cells of which 61% were polymorphonuclears and 39% lymphocytes. White blood count 12,600. Differential count, large mononuclears 9, small mononuclears 3, transitional 1, eosinophiles 1, neutrophils 86. Urine analysis negative. Temperature from the 23th to 28th normal, pulse normal until 27th, on which date it rose to 100 and shortly before death to 150.

Autopsy: At the autopsy an early broncho-pneumonia, acute diffuse splenitis and acute paranchymatous nephritis were found. On the removing of the brain

an extensive accumulation of slightly turbid fluid in the cisterna magna was observed. The pia-archnoid was congested. In many places a perivascular exudate was seen in the form of greyish-yellow lines following the course of the blood vessels. The ventricles were somewhat distended. The fluid was clear. The ependyma was slightly granular. Cultures (aerobic) from the perivascular exudate and from the spinal fluid were negative. Microscopic sections showed the pia-archnoid densely infiltrated with large and small mononuclear cells. The infiltration was definitely perivascular, but also extending into the areolar tissue and cortex. Similar cells were seen adherent to the arterial intima.

Case 2. W. F., Pvt. Co. 29, 8th Bn., 159 Depot Brigade, age 28, race white, one month in the service.

Family History: Father died of typhoid fever; mother of pneumonia. One sister living, one sister died of pneumonia, three brothers living, one dead, cause unknown.

Personal History: Construction worker. Habits as to alcohol negative.

Medical History: No diseases of childhood. Gonorrhea in 1916. Was admitted to the hospital on April 13, 1918. General condition on admission good. Parotid glands on both sides greatly enlarged. Temperature 99. Special senses negative. The parotitis ran a typical course up to the 18th, when orchitis of the right testicle developed. On the morning of April 28th the ward surgeon noticed that the patient did not get up, but did not complain of pain. He appeared stupid, answered questions slowly, but could be aroused by shaking or calling. No stiffness of neck, Kernig's sign not present, pupils reacted slowly. By evening there had developed some stiffness of the neck; a left sided Kernig, spasticity of left leg and right arm. Babinski present on left side, questionable on right. Clonus slight but not persistent. Right pupil reacted more promptly than left. Abdominal reflex present, but not active. No boat belly. Deep reflexes in extremities exaggerated. No deviation of eyes, but fundus congested. No evidence of other cranial nerve involvement. Patient was seen in consultation with

the neuropsychopathic department, which confirmed the findings and the diagnosis. Blood pressure systolic 115, diastolic 105. Frequent involuntary urinations. Spinal puncture was made and 60 c.c. of clear fluid obtained at high tension. Globulin absent, cell count 19. A blood count made on the same date showed a leukocyte count of 19,000, and on a complete physical examination, heart and lungs were found normal. It was impossible to obtain a specimen of urine by catheterization due to urethral hemorrhage and involuntary micturitions during p. m. On April 29th, the following morning, another spinal puncture was made and 40 c.c. of clear fluid removed not under increased pressure. Culture was negative. Cell count was 18. Globulin positive. The general condition and reflexes of the patient were about the same as on the preceding day, except that he was more comatose and a slight increase in the rigidity of muscles of extremities occurred. Examination of the eyes by the oculist showed the fundus normal. The edges of disc slightly indistinct, otherwise normal. On the morning of the 30th another spinal puncture was made and 50 c.c. of clear fluid removed under very slight pressure. Examination of same showed no Gram-negative diplococci. Blood culture was taken and reported negative. The general condition of the patient remained the same as on entering the ward, excepting a slight increase in Babinski and ankleclonus. Reaction of pupils sluggish. Circulation and respiration remained good. On the morning of May 2 another blood culture was found negative. Kernig's sign absent. Eyes sluggish. The patient was somewhat brighter and responded slightly at the mention of his name. From then until the 5th the patient gradually improved and his mentality slowly cleared. A white blood count on the third showed leukocytes 10,300. The left arm which up to the present was rigid, now began to relax slightly and gradually improved so that on May 14 he had regained the entire use of his arm and left leg, and his mind appeared perfectly clear. Patient was allowed to sit up for a while on May 16, and on the 19th was able to be on the porch. On May 21, the patient complained of a slight frontal headache and of being a little dizzy. These symptoms cleared up in 24 hours. The patient was transferred to a general medical ward on May 23, and finally to the convalescent ward on June 3. Throughout the critical illness of this patient the fever never went above 100, except two evenings, one on the 28th, 104.4, and one on the 30th, 102, and the pulse at all times averaged between 80 and 90. Respirations only dropped to 16 on one occasion, otherwise averaged between 18 and 20. Urine analysis May 7: albumin trace; sugar negative, leucocytes and small epithelium present. June 2, albumin negative, sugar negative. Wassermann made in both those cases were negative both from blood and spinal fluid.

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NEUROCIRCULATORY ASTHENIA*

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The syndrome first described by Da Costa after the Civil War as "irritable heart of soldiers," later by Sir James Mackenzie as the "X disease" and as "soldier's heart" and during the recent war by various terms such as "disordered action of the heart," "effort syndrome" and "neurocirculatory asthenia," so common in the Army, is being found as frequently in civilian practice and, as Dr. Paul D. White of Boston states, is probably more common in women than in men. Neurocirculatory asthenia is the term adopted in the nomenclature of diseases of the Medical Department of the United States Army. In some ways Mackenzie's term the "X disease" seems to be the most suitable so far devised as it is the most noncommittal. The next best, "effort syndrome," is a little too general as there is an effort syndrome as far as symptomatology is concerned in the early stages of valvular heart disease, myocarditis, Graves disease, pulmonary tuberculosis and after acute infectious diseases and prolonged overexertion, etc., which must not be confused with the condition as it is found in cases in which no sufficient cause can be found and which begin in early childhood.

Despite the fact that this condition was first recognized over fifty years ago and that it is quite common in civilian life, very little is known about it, possibly because in the literature it has been associated especially with soldiers. In the late war it was classified as a heart condition and was found much more frequently than any organic heart lesion. Some of the cases were first referred to neuropsychiatric services as not infrequently this type of individual developed neuroses or psychoses.

Individuals with neurocirculatory asthenia are apt to complain of precordial pain, dyspnea, palpitation and sometimes vertigo on exertion, inability to stand hard physical or mental work or responsibility, nervousness, excessive perspiration, coldness and cyanosis of extremities, severe pain in fingers in cold weather, tremor of fingers, various gastrointestinal symptoms, constipation, enlarged thyroid, and of being underweight. As a rule these people are irritable, introspective

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and are worse in cold weather. Frequently they are faddists and cranks and are especially susceptible to emotional excitement and so swell the ranks of the Christian Scientists and other types of faith cure and respond well to various kinds of sanitarium, bath and medicinal cures, ethical or otherwise. They are, however, very apt to have relapses. The symptoms may be very mild or so severe that the individual is for life a semi-invalid.

On physical examination, a slight, poorly nourished type of individual is found who usually is pale and whose face is apt to be lined and drawn. The muscular development is not good. They have long, flat chests with an acute sternal angle and protuberant abdomens due to accentuated lumbar curvature. There are frequently foci of infection about the accessory nasal sinuses, adenoids, tonsils, teeth, and so on. The thyroid gland is often slightly enlarged on palpation and inspection but there is no thrill or bruit over the gland, and the eye symptoms characteristic of Graves disease are absent. The respiration is usually shallow and normal in rate though it may be very slow. The vital capacity is usually below normal. Signs of healed or inactive pulmonary tuberculosis are sometimes found: the lung findings are usually negative. The heart is often large but is rarely large enough to be considered pathologically enlarged. The apex beat is frequently diffuse and quite forceful, due in part at least to the thin chest wall usually found in such cases. There may be a systolic thrill at the apex at times. On auscultation one may find various systolic murmurs, at the base or in the tricuspid or mitral areas, which are evanescent and vary greatly in intensity, character, location and duration from one examination to another, and with changes in posture, or before and after exercise. That is, these are undoubtedly functional murmurs. As a rule the pulse rate is rapid though at times it may be quite slow. It reacts excessively to exercise tests following which the rate does not return to normal as rapidly as it does in well compensated organic heart lesions. The heart is regular though, when the respiration is slow, there is quite often a sinus arrhythmia. Extra systoles are found at times. The blood pressure is about normal; in young individuals relatively high and in older ones relatively low. Real hypertension or hypotension is rare. The

fall in blood pressure following a rapid change from the recumbent to the erect posture may be sufficient to cause evrtigo or even fainting. The vasomotor system as a whole is unstable, as is shown by the dermatographia, cyanosis of dependent parts and vertigo and fainting after exercise, changes of position, standing at attention for a few minutes or when being examined. There is usually more or less ptosis of the abdominal viscera, sometimes signs suggestive of chronic appendicitis, cholecystitis and quite commonly signs of chronic constipation. There is often, especially in cold weather, a cyanosis of dependent parts. There is a cold perspiration of the palms of the hands; a cold wet hand being a very characteristic finding. There is usually a tremor of the fingers. Characteristically there is, during an examination, a profuse perspiration from the axillae. There are no urinary disturbances though albuminuria, orthostatic in type, may be present from time to time. The basal metabolic rate is not increased. There may be a slight anemia.

Mackenzie states that the diagnosis of medical men are as numerous and varied as are the complaints of the patient. In civil life, these cases have commonly been classed as neurotics or neurasthenics but have been treated both surgically and mentally for almost everything imaginable. In differential diagnosis, organic heart disease, hyperthyroidism without exophthalmos and incipient pulmonary tuberculosis are the conditions most difficult to distinguish. Its intimate relationship to many of the functional neuroses, psychoses, etc., must also be borne in mind. The differentiation of the "X disease" from the first three conditions mentioned is made especially difficult by the fact that an "effort syndrome" that is an excessive reaction to effort, is present in these conditions. Organic heart disease may as a rule be differentiated by the greater cardiac enlargement, the difference in the character, time, intensity, duration, location and constancy of the murmurs and the accentuation of the various sounds. Toxic goiter without exophthalmos can readily be differentiated if the basal metabolic rate can be determined. Clinically this is more difficult but the shorter duration of the disease, and the presence of bruit and thrill over the thyroid, of loss of weight and the gastro-intestinal symptoms of Graves disease

are the chief diagnostic points. Of course if there is exophthalmos the differentiation is more readily made. The finding of an active process by physical, x-ray, or laboratory examination, loss of weight, fever, etc., serve to differentiate incipient pulmonary, glandular or intestinal tuberculosis from this disease.

As to the etiology of this condition, on questioning, it is usually found that from early childhood, the individual has not been strong muscularly and has had difficulty in keeping on equal terms with his or her contemporaries either in school or at play especially when endurance is needed. In some border line cases, symptoms do not appear until the reserve of the individual has been sapped by some acute or subacute infectious disease such as typhoid, pneumonia, influenza or prolonged overexertion as after many hours of flying at high altitudes after which the convalescence is much slower than is usual. This in many cases, however, may be due to an effort syndrome arising from a myocardial involvement by the disease and not a real case of "X disease." When people with this condition first start work, they often are forced to change their occupation several times before finding something they are physically able to do. They are apt to end up in some sedentary occupation which they keep at all their lives with little or no promotion as increased responsibility always causes a breakdown. From their histories and physical appearance it seems that these individuals were in childhood very similar to that type of child described by Emerson as the "malnourished child." Is it not possible that the man or woman with this condition is the "malnourished child" grown up? The fact that these individuals as a rule have rather finicky appetites and lead rather irregular lives makes it seem possible that chronic improper, not necessarily insufficient nutrition, complicated by the presence of chronic foci of infection may have something to do with causing the condition. It seems that the metabolism in these cases must be altered in some way so as to prevent the accumulation of a reserve which may be utilized when needed for unusual or increased mental or physical work.

In our Army and in those of our allies, graduated exercises have played the most important role in the treatment of these cases. Undoubtedly the diet at the hospitals and camps

in which these cases were treated was better than it was in the trenches or training areas and camps. However, in this country, the full diet of the average Army hospital does not differ materially from the regular ration of the camps and cantonments. That is, it is a fairly concentrated high caloric diet relatively poor in greens and other vegetables, high in cellulose and in dairy products which MacCollum states are necessary to a well balanced ration. At United States Army General Hospital 28, Major Woodyatt arranged a menu that contained enough dairy products and a sufficient quantity of greens and coarse vegetables to make it possible to almost entirely discontinue the use of laxative even in psychiatric wards. Cases with neuro-circulatory asthenia improved considerably after this diet was instituted even without any regular system of exercises. Drugs do not seem to be of any value in the treatment of this condition except for the psychic effect; in fact, stimulants such as digitalis, strychnine and caffeine are contra-indicated as they often cause the symptoms to be aggravated. Hydrotherapy, except for the hot cold hot morning shower is not of value in treatment; frequent hot tub baths are enervating and therefore contraindicated. A regime of rest, exercise and diet analogous to that recommended by Dr. Emerson in the treatment of the "malnourished child" seems to produce the best results. Absolute rest in bed is contraindicated, but, if it is possible for the individual to rest for a few minutes after exercise, or in the middle of the day, it makes the improvement more rapid. Exercise in gradually increasing amounts and especially exercise in the open is of great value especially when it can be followed by a few minutes of complete relaxation. In my opinion the necessity of a well balanced ration containing a sufficient amount of vegetables to regulate the bowels should be emphasized much more than it generally has been. Of course, all foci of infection should be cleared up as early in the treatment as is possible. If the patient will cooperate and carry out faithfully a regime such as is suggested quite satisfactory results can be obtained after several weeks treatment. It is, however, advisable to inform them that, while they will in time be better if they follow instructions and live properly, they probably will never be as strong as the average healthy indi-

vidual, and therefore, must not try to do more than they know by experience they are able to do and keep well.

7 West Madison Street.

RADIOGRAPHIC STUDIES IN SHADOW DENSITY, FROM THE STANDPOINT OF THE CLINICIAN*

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This paper is prepared with a view to promoting among general practitioners a greater interest in the subject of Roentgenology so far as it pertains to chest pathology in tuberculosis. The interpretation of radiographs of the chest has been left largely to the Roentgenologist, which is manifestly unfair to him, in view of the fact that the history of the case, together with all clinical evidence, as well as careful physical examination of the patient, is essential before arriving at definite conclusions. Mutual co-operation of both clinician and Roentgenologists is essential in arriving at a diagnosis.

A fairly large experience in the study of radiographs of the chests made upon soldiers, has convinced me of the great practical value of these adjuncts to diagnosis, especially in tuberculosis, the one disease in which there seems to be at times considerable difficulty in arriving at definite conclusion. Tuberculosis being dependent upon early recognition to effect its cure, it behooves us to avail ourselves of any and all adjuncts to diagnosis of practical value.

We recognize that the same laws that apply to the transmission of sound apply to the transmission of light. The pathology in the lung incident to tuberculous infiltration is capable of producing certain changes on auscultation in sound waves. And so with the radiograph, the same pathology produces changes in the vibration of light waves. It has been stated that in traversing the human body "radiation passes through an aggregate made up of portions of decidedly different densities, the amount of absorption dependent upon both density and thickness," recording on the sensitive film in definite and permanent form varying shadow densities, dependent upon the pathology and the degree of infiltration in the lung or the intercepting me-

dium, between the luminous body (the target) and the lungs as exemplified by serous effusions or empyema.

In the radiographic study of shadow densities in tuberculosis a certain definite method of procedure must be employed. By means of fluoroscopy, especially fluoroscopy (vertical), we can study fluid containing cavities, accumulations of fluid in the pleura. In this the value of the vertical position is apparent. The recognition of shadow densities by means of the fluoroscope will enable us to determine by confirmatory physical findings the extent of the lesions in a tuberculous infiltration. It must be remembered, however, that all shadow densities are not due to tuberculous infiltration, and that the lung on fluoroscopic examination will fail to light up in the presence of pathology other than tuberculosis.

The depth of a pulmonary lesion may be indicated by stereoscopic plates; they will differentiate between pulmonary and pleural or extra pleural lesions. In tuberculosis they resolve the shadows into their components, and thus give a truer idea of the density of the infiltration. For all practical purposes, we can study the details in shadow density on the flat plate.

The study of diaphragmatic mobility and excursion is of the greatest importance. Masses of air containing vesicles and frequently early tuberculous infiltration producing showers of crepitant rales will prove negative at times so far as the plate is concerned. The infiltrated and engorged bronchi, blood vessels and lymphatics, however, produce shadow densities of varying degree, with shadowy net-work radiating from the hila toward the periphery. It must be remembered that a tuberculous process, several M M, is necessary to produce definite density and lung markings. Time and again definite physical findings of incipient tuberculosis, accompanied by considerable moisture, give a negative plate. Extensive tubercle deposit, accompanied by a pneumonic exudate, usually appears as a faint homogenous shadow indistinct in outline. This may be several M M to a centimeter in diameter.

Finally with extensive tuberculosis infiltration there is a coalescence of these shadows, producing the large homogeneous shadow of considerable density.

Physical signs are at times absent in the

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presence of deep seated cavities plainly visible on radiographic study. They appear as ring-like structures and usually imbedded within the infiltrated lung surrounded by a capsule of connective tissue.

If the cavities are less than one inch in diameter and contain a little air and are without a definite capsule, they are difficult of recognition. A cavity of large size, on the other hand, filled with secretions will cast a shadow of sufficient density to at times make it indistinguishable from the infiltrated lung.

Annular Shadows.—Sampson, Haise and Lawrason Brown of the Trudeau Sanitarium have made a study of the so-called pulmonary and pleural annular radiographic shadows, silent cavities. They have endeavored to show that many of these cavities are not intra-pulmonary, but interplural and situated between the lobes or between the lung and the chest wall, or that they are often interlobar pneumothoraces or hydropneumothoraces or the usual localized pneumothorax.

These authors state that nearly all intrapulmonary cavities cast either a simple rarefaction on the plate or a "rarefaction complex." Whether or not these areas of greater transmission of ray are seen depends upon the size, shape and position of the cavity and the density and character of the adjacent tissue.

They further state that there is probably no single roentgenographic manifestation or combination which is diagnostic. The absence of marked diminution of lung markings inside an area or areas of rarefaction is the most dependable, and if the size and position of such an area or areas are taken into account a diagnosis of cavity can be made with much assurance. A somewhat circumscribed area of rarefaction inside a consolidation or marked infiltration is also of much value and fairly reliable.

The authors call attention to a manipulation that leaves one in much doubt as to its diagnostic value in relation to intra-pulmonary cavity in the annular or ringlike shadow varying in shape, seen many times in normal or mildly infiltrated lung fields, and it is this picture that they have attempted to investigate.

They have shown that many times more ray is absorbed inside these annular shadows than in the surrounding lung tissue; in a small percentage of cases more ray is transmitted through

this ring, while in about 60 per cent of the instances the transmission is the same. Lung markings are profuse in many of them, even when the sign is extreme, occupying an entire apex or upper third.

The profusion of lung markings, the greater or equal absorption of ray through these annular shadows, and also the fact that certain of them change their shape and size rapidly make one very skeptical as to their value in the diagnosis of intrapulmonary cavities. In many instances the authors have shown that some as large as 3-5 cm. disappeared in from three to six months, or became larger and then smaller and finally disappeared.

A few of these annular shadows are assumed to be the walls of intrapulmonary cavities, but the presence of other confusing shadows makes it almost impossible at times to draw definite conclusions.

They describe these ring-like shadows as of varying characteristics: At times they are like a ring of dense fibrous tissue, at other times like a circular deposit of fibrinous exudate, and lastly they may also appear fairly broad and homogeneous. In many instances the lower margin is horizontal (possible fluid level). Seventy per cent of these shadows are above the third rib; the rest are scattered anywhere in the lung field.

In the study of over 423 consecutive cases admitted to the Trudeau Sanitarium, they found these annular shadows occurred in 50 cases, or 11.8 per cent.

At first these observers interpreted these annular shadows as intrapulmonary cavities, but as time went on they grew skeptical; that they contained fluid could not be denied, for the lower demarcation always remained horizontal, no matter what position the patient assumed. This change occurred immediately and before the fluoroscope. When the patient was shaken change of fluid level was observed. As this could only take place in the presence of air, these observers were finally forced to the conclusion that they were dealing with a definite cavity containing fluid and air.

At times in radiographic study, with little consolidation, the plate shows no evidence of structural difference. Marked deviation from normal shadows is indicative of pathological change in pulmonary tissue. For the study of

localized unilateral increase of density a good trans-illumination is essential. If there is no absence of symmetric change, there is probably no gross tissue abnormality.

Subjective and objective signs usually precede structural lesions showing distinct shadow changes. Fluoroscopic examinations are unreliable in the diagnosis of early tuberculosis; diaphragmatic excursion is readily noted, shadow densities outlining the compressed lung in pneumo-thorax are readily distinguished; the structural changes in advanced phthisis are wonderfully outlined and much valuable information as to the extent of the lesion may be obtained.

The radiograph should be carefully studied by all as an adjunct to diagnosis especially in tuberculosis. The relation of shadow densities to physical findings are of the greatest importance and practical value.

The flat plate and stereoscope, when properly used, are adjuncts of the greatest value in the diagnosis of chest pathology.

2738 Pine Grove Ave.

STRICTURE OF THE URETHRA*

FLOYD STEWART, M. D.,

ST. LOUIS, MO.

Stricture of the urethra, a condition that produces a narrowing of the canal, an obstruction to the flow of urine, which, in time, may cause an extension of a diseased condition to the bladder, ureter and kidneys.

It is produced by an inflammation or an injury to the urethra which causes a deposit of fibrous tissue underneath the mucous membrane of the urethra which interferes with dilatability and contractibility.

Strictures are divided into linear, annular and tortuous, depending upon the amount of inflammatory process, the amount of infiltration, also whether it is traumatic or gonorrheal.

Your attention is particularly called to the fact that by traumatic I mean the term to indicate a true traumatism of a urethra that is

free from a diseased condition and not to confuse it with a traumatism produced during a gonorrheal infection.

No stricture is formed unless there is an extravasation of urine into the tissues. This extravasation produces an inflammation in the submucous. The mucous membrane of the urethra becomes infiltrated with round cells which is the first stage of the formation of fibrous tissue.

There is usually a discharge from the urethra when strictures are present, though it is not true in every case.

I am not going to bore you with a long paper regarding the different theories or controversies that have taken place regarding stricture of the urethra and no matter what one believes as to the formation, the treatment of the condition is the all important thing to be considered.

Referring to the division of stricture—those that affect the anterior urethra are more amenable to treatment than those of the posterior. This is due not only because of the accessibility of the anterior urethra but it being less resilient than the posterior or bulbous portion which allows distention and further extravasation of urine, abscess formation, which, in time, affect the tissues around the urethra, bladder, and may extend to the kidneys.

Treatment. True traumatic strictures are those caused from direct violence—must be treated surgically—no other method will give any great relief.

Strictures due to gonorrhea can be treated in a number of ways—dilatation—by steel sounds, bougie, dilators, electricity and surgically.

The case of steel sounds is one of the oldest methods we know of and one that produces good results in a limited number of cases when passed properly, otherwise poor results and damage.

The method is slow and whereas it gives fairly good results in a reasonable percentage of cases, the time it consumes and uncertainty as to when the patient is really cured—both are drawbacks, but one that is thoroughly accepted.

The use of the filiform or bulbous or olive point bougie is carried out on the same principle.

The different dilators are worked upon the same principle.

*Read before Southern Illinois Medical Society, Nov., 1919.

Surgical Treatment. The indications are as important or more so than the methods (Internal Urethrotomy).

The indication for surgical treatment:

1. Non-dilatable. Cases where fever follows passage of sounds.
2. Resilient stricture.
3. Irritable.

External urethrotomy, rupture of the urethra, urinary infiltration, impassable stricture, complicated by retention of urine.

Traumatic strictures.

I shall not go into technic of different operations, for I have nothing to add to the general accepted procedure except, I consider that too many operators are careless in the after treatment which should be looked after very carefully, also to the sutures they use, for I believe silk or silk-work gut is indicated far more than catgut.

I have the following treatment of strictures to bring to your notice, i. e., I am going to again exclude true traumatic ones and take up for consideration the stricture following gonorrhea.

Preliminary treatment: Unless forced to do otherwise, I give all my patients 24 to 72 hours of medicinal treatment, consisting of opening the bowels, thoroughly eliminating all alcohol and giving urinary antiseptics, but I combine my hexamethyldiamin with strychnine and acetphenitidin, or if the urine is very acid, I give the citrate of potash with strychnine.

My method is first to find the size of the stricture with olive pointed bougie. After that is determined, I wash the urethra out with cyanide of mercury 1-5000, introduce an olive point nickelplated electric bougie two sizes larger than the size of the stricture, connect that with the negative pole and put the positive pole on the abdomen without any pressure except enough to hold it in contact. I turn on gradually enough current until the meter registers 14 milliamperes and I hold same until the bougie slips through the stricture which, if it is very small, goes through in five (5) minutes, otherwise seven (7) to ten (10). After slipping through, I bring the base of the bougie in contact again and by working steady with firm pressure, the

bougie is held until it again slips passed the stricture.

The urethra is then washed with boric acid—a sound passed the same size as the bougie.

Silvol or argyrol 10 per cent. solution is then injected. The patient is seen but not touched for at least five (5) days; usually it is seven (7) days before any sound is passed.

Each time the electricity is used, a bougie two sizes larger than the last is used.

My results, now covering a period of ten or twelve years, are all that could be desired. No returns have been noted. Cases have been watched for that period, that is cases that have undergone the regular course. Only two cases have not proven successful, one in which the patient left the city, and I do not know the result—the other, is where I was foolish enough to allow myself to be persuaded to apply the treatment before all the soreness had entirely disappeared. The second treatment made the penis so sore that he refused further aid. Although he would not continue the treatment he called at the office eight months after and said that the penis felt better. No examination was made.

I am a strong advocate of this method. I believe in it and my results encourage me.

In the treatment of stricture impassable to a sound—cases where a filiform is indicated—I prefer trying the water pressure method and it is applied as follows:

The irrigator is filled with hot boric acid solution and is elevated as high as possible with a straight narrow nozzle. The water is introduced into the urethra with a sufficient force to the flow, allowing the water to flow in and out and then stopping the outflow. I have been able to overcome some ugly strictures sufficiently to be able to introduce a catheter and relieve the patient by a continuation of the treatment. I was able after a reasonable length of time to pass a sound and then to apply my regular treatment.

The next method for overcoming impassable stricture is as follows:

After irrigating the urethra with hot boric acid solution, cocaine or cocaine and adrenalin are then introduced into the urethra and held there for a period of ten minutes, then an elec-

tric lighted endoscope is passed down to the stricture. After mopping out the urethra a filiform bougie can be passed without traumatism and under the guidance of the eye. After the filiform bougie is passed, a Gouley funnel catheter is then threaded over the filiform bougie down to the stricture. Olive oil is then injected into the urethra until same is thoroughly dilated. By this means the funnel catheter slips through the stricture comparatively easy. This method yields good results if there has not been too much manipulation previous to the above treatment, but it is more difficult after the urethra has become bruised and sensitive from the attempt to pass instruments through the stricture. In that case it is more difficult but still practicable.

Digressing for a moment before closing, I wish to call your attention to the effort that the Government is making for the control of venereal diseases and I believe that some action should be taken by this society to aid the Government to control the diseases that are now so prevalent in this country and have been for so many years.

As the spotlight of publicity has been turned on venereal diseases, and the attention of the general public has been directed toward the destructiveness, misery, and suffering that follow venereal diseases, the medical profession must assume absolute responsibility for permitting a certain proportion of these cases to go abroad and spread the disease without due regard to the consequences that will result. All physicians who treat venereal diseases and especially gonorrhea, should adopt a standardized series of tests that are to be made before the patient is discharged as cured. Too little attention, by most physicians, is paid to the positive cure of this disease that has infected so many innocent women and children. Too many physicians consider that when the discharge has stopped, the patient is cured, and do not use the scientific methods of seeing whether their patient are free of all neisserian infection. How much untold suffering, pain, wretchedness and unhappiness can be laid at the door of the careless physician.

To illustrate this point more effectively, one case out of the many thousand can be brought to bring this question home to every physician that is doing venereal work. The case in point

is this: a young man became infected at his first intercourse; went to a reliable physician, as he thought, and was dismissed as cured. Three years elapsed between the time that he was cured and his marriage. In the interim no intercourse had been indulged in. After a few weeks of married life, his wife was compelled to consult a physician who diagnosed the case as acute neisserian infection. The husband at first attempted to accuse his wife of unfaithfulness but fortunately, the physician who had his wife's case, insisted upon examining him. On examination they found several urethral crypts inflamed with the gonococcus. This, in itself, was a terrific blow but that was not half the suffering he and his wife had to undergo.

It was necessary to perform a laparotomy on his wife and the tubes and ovaries had to be removed. As this couple had anticipated the pleasure of having children, they were plunged into the greatest grief when the truth was told them. What a different story would have been told, had his physician thoroughly tested him before he had discharged him as cured.

How many cases like this can be found in the United States where the physician has neglected to do his full duty by his patients with the gonorrheal fixation test at our disposal, together with the electric endoscope massage of the seminal vesicles and prostate, the tests with different drugs such as nitrate of silver, microscopical examination of the secretion from the urethra and prostatic urethra; no such terrible diseased condition should be allowed.

Yet censuring the physician, there must be a word said in his defense for it is not always his fault as a great many patients, who contract gonorrhea, will not co-operate effectively with the physician after he himself considers them as cured.

As the Public Health Department is attempting to enlist physicians in their fight against venereal diseases, it is to be hoped that every physician will give them his hearty support and that their co-operation will be active and effective which can be brought about by realizing the seriousness of the situation and the responsibility that rests upon physicians.

Chemical Building.

DEAD TEETH AND ANTRAL PATHOLOGY

JOSEF NOVITZKY, D. D. S.

SAN FRANCISCO, CALIF.

Now that oral sepsis is becoming universally recognized as a cause of systemic disease, it seems fitting to indicate somewhat specifically the commonly ignored relation of antrum infections to dead teeth.

In the surgical operation for the removal of dead teeth, which has been described in detail elsewhere¹, I have found many dead upper teeth draining under the antral membrane without perforating it. This has been commonly and very distinctly demonstrated during the removal of upper molars by dissection.

In the many cases where the antral membrane is not perforated, it is quite useless to make a puncture under the inferior turbinate of the nose and by this means to attempt to determine antral abnormalities of dental origin by means of a diagnostic washing. If the antrum is full of pus, this is obvious without the washing. If a streptococcal fluid has collected under the membrane, antral washing will not show it.

Moreover, antral washing would not suffice to diagnose even a polyp protruding into the cavity from the root of a dead tooth. Washing would suffice to indicate the presence of yellow pus, but the absence of yellow pus would not be conclusive since the infecting organism is usually streptococcal and not associated with yellow pus.

Acute stages of suppuration will occasionally be made manifest by the puncture and washing, but it must be remembered that such acute stages are often temporary. They are succeeded by dormant stages whether they are treated or not. A diagnosis by washing during the dormant stage proves nothing. The rhinologist has been prone to grant that a sinus once infected is always infected, for the common treatment has permitted the focus of infection to remain.

But the permanence of sinus infection will probably not be granted in the near future, when the effort to secure drainage will give way to the search for the predisposing cause of the infection and the attempt to remove this cause. Ven-

tilation and drainage in the dental field have proved a failure; granulations and dead bone cells have not been 'cured' by mere drainage. At operation I have disclosed an amazing number of dead teeth with drainage ways leading from the root ends to areas under the antral membrane or from the root ends through the membrane into the cavity.

In cases of antrum infection emanating from dead teeth, acute suppuration is not commonly manifest. The patient may experience a colorless muco-pus draining from the nose into the throat; but yellow pus will not be evident, since it is not produced by streptococcal organisms.

In the light of our knowledge regarding dead teeth and the infected bone surrounding their root ends, we must realize that it is fruitless to remove the nasal wall of Highmore's cavity in order to establish drainage and at the same time to ignore the dead teeth and necrotic alveolar process which are the cause of the nasal affection.

The suppurative alveolar process may cause the antral membrane to be pushed up from the cavity wall for a more or less extensive area. Polypoid tissue which may be formed over the root ends of infected teeth may act as a kinetic source of reinfection not only of the maxillary antrum but also of the other nasal cavities. Dead tooth roots in the antrum floor and a blocked air way because of abnormal anatomical nasal occlusions should be considered seriously by the nasal surgeon.

Migration of disease producing microorganisms and infection of the blocked nasal parts should be expected by the rhinologist.

If dental surgery were performed more commonly by competent surgeons, working, as in general surgery, with direct vision of the parts operated on, many present surgical problems would be solved or at least mitigated. Sphenoid, ethmoid, and other infections will be greatly lessened when the dentist stops devitalizing teeth and learns to have dead teeth and surrounding areas of infection thoroughly removed, when the rhinologist comes to realize that dead upper teeth have a direct bearing on infections of the upper air passages and the maxillary antrum. Time will undoubtedly demonstrate a lessening of nasal infections directly proportionate to the lessening of the number of dead teeth, for every dead tooth

1. Transactions of the Panama Pacific Dental Congress, Aug.-Sept., 1915; California State Jour. of Med., Nov., 1915; Pacific Dental Gazette, Feb., 1917; Jour. of the Cal. State Dental Assoc., Nov.-Dec., 1917; American Jour. of Surg., March, 1918; New York Med. Jour., March 23, 1918; Journal of the National Dental Assoc., June, 1918; Dental Summary, July, 1919; California State Jour. of Med., Sept., 1919.

is infected within six months of the time of devitalization.

209 Post St.

THE TUBERCULAR GOITER PATIENT*

E. P. SLOAN, M.D.,

BLOOMINGTON, ILL.

One of the greatest pioneer surgeons included in his Golden Rules of Surgery, the following: "Pulmonary Tuberculosis is always a contra-indication for any serious operation." The convalescence of a tubercular patient after operation is usually slow. Unless relief from the surgical condition will raise the resistance of the patient to the point that the tubercular infection will at least be arrested or in the presence of a grave emergency, operation is not justifiable.

Goiter and tuberculosis in their early stages affect the system in nearly the same way; so similar are their manifestations in the early stages that the differential diagnosis is difficult. I will not speak of that however. I wish to speak of the patient that is known to be tubercular and has a goiter.

When a patient is carrying the load of both conditions, if the goiter is removed, the patient should overcome the tuberculosis. If she has resistance enough to carry both, remove one and she usually can overcome the other.

In the last five years we have operated on 94 cases that we thought tubercular before operation and everyone has gained in weight and seems to have improved satisfactorily.

I want to report briefly three of these.

Margaret O., 19 years of age, operated on in May, 1915. Had been under treatment for two years for tuberculosis; several laboratory examinations were positive. She had some rise of temperature afternoons, especially during and after menstrual period. She ate ravenously, but weighed only 94 pounds. Her pulse rate was 150 to 170. Her goiter was removed under local anesthesia. In one week her pulse rate was below 100 and October 3d, her weight was 134.

She seems to have recovered from the tuberculosis.

Mrs. C. J. had positive diagnosis of pulmonary tuberculosis made at various times during 1912 and again in 1914-1915. Developed exophthalmic systems in 1916; operation with local anesthesia, August, 1916; the pulse rate dropped from 140 to 84. Her nervousness and insomnia disappeared. She gained 32 lbs. in four months and seems well.

Miss B. G., 23 years old, student at University of Illinois, had been tubercular for years. Developed symptoms of exophthalmic goiter during the winter. A hyperplastic goiter was removed April 2, 1917. Returned to school in eight days. Pulse dropped from 150 to 88, nervousness, insomnia and the afternoon rise of temperature disappeared. She gained 22 lbs. during the summer. She seems to have recovered from the tuberculosis during the two years since the operation.

Conclusion:

Pulmonary tuberculosis is not a contra-indication for the removal of an active goiter with local anesthesia.

THE TREATMENT OF SEPTIC FRACTURE *

DENNIS W. CRILE, M. D.

CHICAGO

The treatment of septic compound fractures to be described rests on a study of the end results of cases treated in a variety of ways. The slides have been selected from about 200 others which represent a few of the interesting cases seen during three and a half years of war surgery. Much of the time it has been impossible to keep any record whatever of cases, but from time to time opportunity and the cases coexisted. The records include the end results of 378 cases of septic fractures of the femur and 27 cases of septic fracture of the knee joint. Many of these cases were treated since October, 1918, at Edmonton Military Hospital in England. There are primary operative records of over eight hundred compound fractures done near Ypres and at the Harvard Unit's Base Hospital in France since 1916. During the last year it was possible to observe many of the methods are a result of the lessons of and often treat cases of malfunction referred from outlying hospitals for corrective work. malfunction since we believe that a study of poor results and disasters is of more benefit in their prevention than any other study.

One should consider the entire limb—in fact, often the entire locomotor system—as a unit. end result must be borne in mind from first to last throughout the entire treatment. Thus attention should not be confined to the actual fractured bone but to its overlying muscles, fascia, nerves and skin, the joints above and below, the

*Read before Southern Illinois Medical Society, November, 1919.

*Read before the Chicago Medical Society, Oct. 22, 1919.

hand and foot, the fingers and especially the great toe.

For what good comes of a straight bone if its articulations are useless or if a hallus rigidus, secondary in origin, cripples the patient? What is the use of perfect alignment of the femur if secondary changes in the knee joint ruin the function of the leg? One must know that the immobilization of joints over period of 3, 4 or 5 months results in capsular sclerosis, sclerosis and atrophy of controlling muscles and sometimes in bony ankylosis, and that the presence of sepsis increases both the degree and the speed of these changes.

One should be able to preserve almost every potential function remaining at the time of injury—excluding cases with nerve injury. Therefore, the most important point in the preservation of function is the prevention of sclerosis of the soft parts overlying and surrounding the fracture. The commonest cause of this sclerosis is disuse and so long as sepsis continues, activity may disseminate infection. Therefore, it is necessary that sepsis be eliminated at the earliest moment possible. Foreign bodies (a source of sepsis) should be removed always, the sooner after injury the better, as then we use prevention rather than cure. All anemic tissue (skin edges, damaged fat, fascia, muscle and bone) should be removed. Not only should anemic tissue be removed but an active blood supply should be insured to all of the remaining tissues. Nothing should be done that will hinder that blood supply. No tight bandages, no coaptation splints, no tendencies of the enclosing skin itself should be allowed. For inflammation, the normal defense against sepsis is absolutely dependent upon free circulation at the point of bacterial attack.

By observing these principles, and with the aid of antiseptics, inoculation can generally be overcome and sepsis prevented as a rule. If these measures do not suffice, however, and if inoculation becomes infection with microbic invasion of the tissues (inoculation being only surface contamination) localizing measures should be employed. Chief of localizing measures, we believe, is free dependent drainage, drainage so engineered that at no moment does pus stagnate, or develop pressure even of the slightest degree. One should not hesitate to sacrifice a large piece of

the hamstring muscles, the calf muscles, or the triceps to obtain free dependent drainage. Be more cautious in the forearm as each muscle has its individual function and there is little group action. Radical drainage is a conservative measure.

Fomentation and absolute immobilization are the greatest helps. Carrel's treatment is useful and may in some cases replace fomentation.

These measures generally suffice to localize sepsis within three days or a week. During this time it is probable that some tissue which at first had a blood supply has lost that blood supply as the result of swelling and the compression consequent. If the tissue is muscle or fascia, it will slough and come away with the drainage. If it is a piece of bone, it is forever condemned and is a sequestrum. As such it will become a refuge for bacteria into the recesses and cells of which no blood can penetrate to destroy the invaders. As such it becomes an impregnable fortress from which chronic sepsis issues and from time to time acute attacks originate. If left in place, it results in faulty callus, sclerosis of bone and muscle, sinus formation and sometimes septicemia, pyemia and amputation or death. If removed, sepsis is soon overcome, so that massage and early mobilization can be instituted. With sepsis localized or gone, the management of the fractured limb becomes relatively simple. The problem then is one of maintaining potential function until solid union occurs, at the fracture. The one best method of maintaining function is exercise. Muscles, joints and ligaments must be moved and their circulation maintained by massage. To accomplish these things proper apparatus is necessary. The requirements of the apparatus are then, first, to maintain the reduction of the fracture; second, to permit motion of the joints, and third, to permit massage of the soft parts. Incidentally, when these requirements are met, frequent inspection for the detection of nascent sepsis is possible and this is very important, since the keynote of treatment is the early elimination of sepsis. A pus pocket drained at once and the cause of the trouble removed, will often obviate secondary hemorrhage, nonunion, delayed union, septicemia or uncontrollable septic conditions which result quickly when pus is under pressure.

We would far rather see pints of pus draining freely from the wound than a few drops of pus under pressure in the wound.

It is not our custom to use plates, wire, screws or any mechanical means of fixation in septic compound fractures since we have seen many cases so treated which resulted disastrously. If disaster followed every attempt to plate compound fractures there would be no need to point out the dangers, but the fact that occasional success rewards the bold surgeons who practice this method makes it necessary to point out the awful consequences which may result. The risks do not justify the results, especially in the light of recent advancements in conservative treatment. There is no treatment so satisfactory in the treatment of simple fractures nor so dangerous in septic fractures.

One should always close the synovia when joints are involved if seen before the articular surfaces are pitted. When drainage of a joint is necessary, it should be thorough. We are not unaware of the excellent results of Willems of Ghent in his ambulatory treatment of septic joints but could never bring ourselves to the point of driving a septic patient out of bed. We are certain that when serious fracture coexists the patient should be kept in bed.

These methods are not panaceal. Every septic fracture will not yield good function, but using these principles, over 70 per cent of the cases of septic fractures of the femur discharged from Edmonton Military Hospital had good function and the remaining cases had serviceable legs. The average shortening was one-sixth of an inch and 60 per cent of all cases had no shortening. One secondary hemorrhage occurred. Three amputations were done.

I need say nothing about tetanus except that when it exists enormous doses of A. T. S. should be given (as much as 150,000 units in fractional doses).

In resume, the aims of the treatment are:

1. The prevention of sepsis during the stage of inoculation.
2. The early elimination of sepsis when present by dependent drainage, immobilization and localizing treatment.
3. The early diagnosis and removal of sequestra at once when diagnosed.
4. Early movements of joints (and muscles).

5. Systematic attention to minutiae.
6. The use of proper apparatus.
7. Constant x-ray supervision.

Some of the cases reported were treated in conjunction with Majors Maurice Pearson, John Beeson, and Lieut. John Paul Jones.

2106 Sedgwick street.

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DON'T DRINK SUSPECTED WATER

Following its custom of several years and for the benefit of Chicago's army of motor tourists and summer dwellers, the Health Department Laboratory has prepared in convenient form the calcium hypochlorite tablets for rendering suspected water safe and thus avoiding the danger of typhoid infection. These tablets contain 20 to 30 milligrams of chlorine per tablet; are put up in glass vials and if kept tightly stoppered in a cool, dark place will retain their potency for about four weeks. The tablets can be had upon application at Room 707, Window 1, City Hall.

In using the tablets the following directions should be carefully observed: Dissolve one tablet by crushing between the fingers in one quart of water in an ordinary Mason jar, which should be sealed with an air-tight cap. The jar is then shaken, contents allowed to settle, and should be stored in a cool, dark place. This is the stock solution and under average conditions will last about one week, after which it should be renewed.

To prepare water for drinking, take one teaspoonful of the clear stock solution, avoiding the sediment, to one eight-ounce glass of drinking water; allow to stand for five minutes, when it is ready for drinking and will be safe. If it is suspected that the water is heavily polluted, two teaspoonfuls of the stock solution should be used to each eight-ounce glass of water. If it is desired to make up a daily supply, ready for use, it can be done by adding four teaspoonfuls of the stock solution to each quart of water.

When you go on a vacation, be careful as to the water supply, flies and mosquitoes, outhouses and refuse disposal. Fine scenery, good fishing and good table fare do not at all make up for dirty and unsanitary surroundings.

Shun the waiter who sticks his thumb in the soup or pokes his finger into the heart of a pie to determine its kind; and darken not with your presence the places where he lurks.

—*Bulletin, Chicago School of Sanitary Instruction.*

Illinois State Medical Society

Annual Meeting—Continued

HOUSE OF DELEGATES.

Thursday Morning, May 20, 1920.

The meeting convened at the Christian Union Church, Rockford, Ill., at 9 a. m., Thursday morning, May 20, 1920, President J. W. Van Derslice presiding.

The report of the Credentials Committee was read, the roll called, and a quorum found to be present.

THE CHAIRMAN: A quorum being present, the next order of business will be the Secretary's reading of the minutes of the last meeting.

Reading of the minutes:

The minutes were approved as read.

THE CHAIRMAN: The next order of business is the election of officers, and the first officer to be elected is the President-Elect of the Illinois State Medical Society.

DR. FOWLER (Chicago): We have come now to one of the most important functions of this convention. The success of any organization depends in a large measure upon the character of men we choose as our officers and leaders. In selecting a man who is to become the President of this organization, we must choose one who is thoroughly familiar with the machinery of the organization. We must choose a man who knows and understands the economic problems that are confronting the medical profession. We must select one who knows the desires and wishes of the masses of the medical profession, and who is in entire sympathy and accord with them. We must select one who is fearless, who has the courage of his convictions, a leader, a leader that we are proud to follow.

Chicago has such a candidate, and in behalf of the delegates from Chicago, I desire to present for President-Elect of this organization the name of Charles E. Humiston, of Chicago.

DR. C. E. CRAWFORD (Rockford): On behalf of the down-state delegation and the members of the Society, I desire to second the nomination of Dr. Humiston.

On motion of Dr. Gilmore, of Mt. Vernon, it was voted that nominations be closed and the Secretary be instructed to cast the vote of the delegates for Dr. Humiston as President-Elect. Dr. Van Derslice then declared Dr. Humiston to be duly elected.

THE CHAIRMAN: Next is that of First Vice-President.

DR. C. E. CRAWFORD (Rockford): I desire to place in nomination the name of Dr. John E. Tuite, of Rockford. It is usually customary for the First Vice-President to go to the place of meeting.

DR. LILLIE (East St. Louis): I second the nomination of Dr. Tuite.

It was voted, on motion of Dr. Nelson, duly seconded, that nominations be closed and that the Secretary cast the vote of the convention for Dr. Tuite as First Vice-President. Dr. Van Derslice then declared Dr. Tuite to be duly elected.

THE CHAIRMAN: Nominations are now in order for Second Vice-President.

DR. BEIRNE (Quincy): I wish to place in nomination Dr. W. E. Shastid, of Pike County. (Seconded.)

On motion of Dr. Gilmore, it was voted to close nominations and that the Secretary cast the vote of the House of Delegates for Dr. Shastid. Dr. Van Derslice declared Dr. Shastid elected.

THE CHAIRMAN: Nominations are now in order for office of Secretary.

DR. FRANK SIBLEY: I wish to place in nomination Dr. Gilmore of Mt. Vernon. (Seconded.)

DR. FREEMAN: I move that nominations for Secretary be closed and that the President cast the vote of this Society for Dr. Gilmore for Secretary. (Seconded and carried.)

The vote was cast and Dr. Van Derslice declared Dr. Gilmore elected.

THE CHAIRMAN: Nominations are now in order for Treasurer.

DR. FRANK SIBLEY: I wish to place in nomination H. E. Markley, of Belvidere. (Seconded.)

DR. TUITE (Rockford): I move that nominations be closed and that the Secretary cast the unanimous ballot of the Society for Dr. Markley. (Seconded and carried.)

Dr. Van Derslice declared Dr. Markley elected Treasurer.

THE CHAIRMAN: Next is for Councilor of the First District.

DR. TUITE (Rockford): I nominate Dr. C. E. Crawford, of Rockford, to succeed himself. (Seconded.)

Dr. Crawford was duly elected.

THE CHAIRMAN: Nominations are now in order for Councilor of the Second District.

DR. EDGECOMB (Ottowa): I wish to place in nomination the name of Dr. E. E. Perisho, of Streator. (Seconded.)

Dr. Perisho was duly elected.

THE CHAIRMAN: Nominations are now in order for Councilor for the Third District.

DR. BRUNING (Chicago): I wish to place in nomination the name of Dr. S. J. McNeill to succeed himself.

Dr. McNeill was duly elected.

THE CHAIRMAN: Nominations are now in order for Councilor of the Eighth District.

DR. FREEMAN (Mattoon): I would like to place in nomination the name of Dr. C. E. Price, of Robinson.

Dr. Price was duly elected.

THE CHAIRMAN: Illinois is entitled to eight delegates to the A. M. A. Prior to this time, we have been electing odd numbers at various years, six one year and two the next, and on account of the incident of this year's meeting coming before the state meeting, it gives us a good time to divide the number evenly. We will elect now four members whereas ordinarily this year we would elect six. Nominations for four members as delegates to the American Medical Association for two years is now in order. They serve two years, but they will sit in one A. M. A. meeting.

The following men were nominated and subsequently elected:

Dr. Charles J. Whalen, of Chicago, nominated by Dr. Sahud, of Chicago.

Dr. G. Henry Mundt, of Chicago, nominated by Dr. Van Paing, of Chicago.

Dr. Frank C. Sibley, nominated by Dr. T. W. Gillespie, of Peoria.

Dr. Freeman, of Mattoon, nominated by Dr. Nelson, of Springfield.

THE CHAIRMAN: Nominations for the alternate delegates are now in order.

The following men were nominated and subsequently elected:

Dr. J. S. Pigall, of Chicago, nominated by Dr. Lesemann.

Dr. A. L. Mann, of Elgin, nominated by Dr. E. S. Gillespie.

Dr. L. D. Smith, of Chicago, nominated by Dr. Bergner, of Chicago.

Dr. W. W. Murfin, of Patoka, nominated by Dr. Burkhardt.

THE CHAIRMAN: The next are nominations for the Public Policy Committee. This is an annual committee and filled each year. There are three members to be elected.

The following doctors were nominated and duly elected:

Dr. H. N. Rafferty, of Robinson, nominated by Dr. Price, of Robinson.

Dr. Blanche Bergner, of Chicago.

Dr. John R. Harger, of Chicago, nominated by Dr. Sheets, of Chicago.

THE CHAIRMAN: Next, nominations for members of the Committee on Medical Legislation, three members to be elected.

The following were nominated and duly elected:

Dr. N. M. Eberhart, of Chicago, nominated by Dr. Callaway, of Chicago.

Dr. Bowe, of Jacksonville, nominated by Dr. Beirne, of Quincy.

Dr. Don Deal, of Springfield.

THE CHAIRMAN: Nominations for members of the Medico-Legal Committee are now in order.

The following were nominated and duly elected:

Dr. C. A. Hercules, nominated by Dr. C. B. King, of Chicago.

Dr. R. L. Greene, of Peoria, nominated by Dr. T. W. Gillespie, of Peoria.

THE CHAIRMAN: The Chair is willing to accept a motion now that we take a postponement of the election until we have passed the matter of new business.

DR. GILMORE (Mt. Vernon): I move you that the further election of officers of this Society be postponed under the head of new business. (Seconded and carried.)

THE CHAIRMAN: The next order of business is the fixing of the per capita tax.

DR. McCLANAHAN: I move you the per capita tax be for this year three dollars the same as last. (Seconded and carried.)

THE CHAIRMAN: The next is the meeting place.

DR. HUGH MACKECHNIE: Without making any particular speech in favor of Chicago, we would like to have the invitation presented to the

House of Delegates from the Chicago Medical Society, from the Chicago Association of Commerce and from the headquarters of the American Medical Association for you to meet with us in Chicago in 1921.

DR. GILMORE (Mt. Vernon): I have been trying to worm an invitation from the Chicago Medical Society for a meeting in Chicago since the Year One. I move you, sir, that the nominations be closed and that it is the unanimous vote of this Society that we meet in Chicago in 1921.

DR. BOWE (Jacksonville): I believe that there are imperative reasons why this meeting should go to Springfield next year. The thing to do is to do the thing that will be the most effective. I believe, in view of some of the things in which we are engaged, that this meeting should go to Springfield next year. We should go to Springfield often.

THE CHAIRMAN: Can we invite ourselves there?

DR. BOWE: We can go on our own initiative. It is my firm conviction that we should meet in Springfield every other year.

We should identify ourselves with Springfield and talk to the people around the State House and let them absorb some of the ideas of the general profession as well as our representatives who occasionally get in there in official positions. We need it.

The men who have been engaged in the legislative work know it. About all they see of doctors down in Springfield is when the legislature is in session and a few of us drift in there to combat measures or to advance measures that are for the public good and the good of the profession.

We need the moral backing of this Society in Springfield, and I would like to have it meet there when the legislature is in session, and you fellows can rub up against those fellows and give them some of the ideas from home.

DR. DOAN (Scottville): Living down in the country as I do, I am afraid if I would go to Chicago I would get lost, and, figuratively speaking, gentlemen, when we go to Chicago for a Medical Society meeting, we will get lost. When we go to Springfield, and I go there often, we are welcome. Those men down there are big hearted fellows. They are so big hearted and so modest that they do not care to invite us when Chicago asks us.

It seems to me that the proper place is to meet when the legislature meets in the City of Springfield, a city that is well prepared to take care of us when we go, and it is always open to all kinds of conventions without invitation, and I think that this motion should be voted down and that we should go to Springfield when the legislature meets if no other time.

DR. NELSON (Springfield): I want to speak in behalf of Springfield. Springfield has been accused more or less of being a little bit hoggish in the matter of seeking conventions. I have heard that accusation in our Medical Societies, and for that reason this year in particular the delegation from Springfield concluded that they would not take the initiative in inviting the convention to Springfield next year. But I want to assure you gentlemen that if you decide to come to Springfield, the right hand of fellowship will be extended to every one of you and you will receive a cordial welcome.

DR. BOWE (Jacksonville): Since Dr. Nelson has spoken, I wish to make this matter clear. The men who were before the last legislature know some of the difficulties that confronted us. We need the moral support of the profession. We need the fellows from home. That is what we need down in Springfield now. That is where we are weak, and I believe Dr. Humiston will bear me out. How many of the fellows from home have talked with their representatives regarding the vital questions that are before us now?

If we have this Society meeting down in Springfield where the fellows from home may come, they are rubbing up against the fellows in state office who are from home, they are talking with the fellows from the state legislature who are from home, they affiliate with them, they are close to them, and they bring to them first hand our views, and they carry conviction. They are not, as these fellows say, the views of a few who are on the inside of the Illinois State Medical Society and dominated by the fellows who are doing things as they say, in medical politics.

There never was a time—it is my personal conviction, and I feel I have a right to speak here, because I made some sacrifice in giving time before the last legislature—there never was a time when we needed your moral support as we do now. There never was a time in the history of this Society when it was more necessary that

each and every individual should get out and take off his coat and go before the people and go before our representatives to talk with them.

We are now confronted with a question here that is vital to our very existence, that is vital to the future of this profession, and it is my stern conviction, and it is based upon experience and observation in Springfield and dealing with this legislative matter, we need the fellows from home.

Just as some members of this Society said, the labor people meet in Springfield when the legislature is in session. I was down there when the eight hour bill was before the legislature, and they were there and the fellows from the shops were there, and everybody was there, and they got a hearing. That is what we must do. This thing of talking through the newspapers at long range is not very effective. If you are going to give a man a hypodermic, you want to get under his skin and get close to him.

DR. RICE (Quincy): I would like to move as a substitute to the pending motion that we meet in Springfield.

DR. McCLANAHAN: I would like to go to Chicago. Chicago is a great medical center, but I believe we ought to go to Springfield. The osteopaths, the chiropractors, go there. They are there now. We ought to go to Springfield.

A rising vote was taken, and the majority voted in favor of Springfield as the next meeting place.

DR. NELSON: I believe this is the first time you have ever voted to come to Springfield without invitation. I think that will be a stimulus to the Medical Society of Sangamon county to make an extra effort to give you a good time.

THE CHAIRMAN: The next order of business is unfinished business.

DR. GILMORE: Your secretary wishes to present the following amendment to the by-laws:

That Chapter 2, Section 1, Line 6, be changed to read, "A committee on Medical Education and Hospitals." I move the adoption of the amendment. (Seconded).

THE CHAIRMAN: In explanation of that, this simply follows the new ruling of the A. M. A. at New Orleans, in which the Committee on Education is to be changed to the Committee on Education and Hospitals. (Carried).

DR. GILMORE: It is proposed to change Sec-

tion 7, Paragraph 3 to read as follows,—after the word "education" add "and hospitals" and strike out all words after the word "Association." I move the adoption of the amendment. (Seconded and carried).

DR. GILMORE: And this proposed change: "Section 7 of Chapter 10 of the by-laws of the Illinois State Medical Society is hereby amended by striking out Section 7, as heretofore existing, and substituting therefore the following:

"When a member in good standing in a component Society changes his residence to another county in this State, such change of residence shall terminate his membership in such component Society and in the Illinois State Medical Society. Such member shall be entitled, upon his request, to demit from the Society whereof he has so been a member, which demit shall be issued without cost to him. Upon presentation of such demit to component Society in the County to which he removes upon his election to membership there, such election to membership in the Society into whose territory he has removed shall operate to reinstate him in Illinois State Medical Society as of the date of his demit. This shall not affect members in military service and in the service of the State." I move the adoption of the amendment. (Seconded).

THE CHAIRMAN: You understand the change in the by-laws. The change in the by-laws says that when a member of this Society moves into another county, that he is dropped from membership in the county from which he has removed, that then it is elective upon the County Society into which he has moved to accept him or not as a member if he applies.

Carried.

DR. GILMORE: Section 6 of Chapter 8 of the By-laws of the Illinois State Medical Society is hereby amended by adding a paragraph to be known as Section 6 as follows:

"In the interval between two annual meetings, if a Councilor shall for any reason, such as sickness, death, moving out of the State or Councilor District, or for any other reason which would prevent a Councilor from attending to the duties of his Councilor District or absent from two consecutive meetings, his office shall be declared vacant, and the Council at its discretion shall have the authority to fill the vacancy for the period between the date at which the office was

declared vacant and the next annual meeting of the House of Delegates." I move the adoption of the amendment. (Seconded and carried).

Section 3, Chapter 9 of the By-laws of the Illinois State Medical Society are hereby amended by striking out Section 3 as heretofore existing and substituting therefore the following:

"The Committee on Legislation shall consist of three members and the President and Secretary of the Society *ex-officio*, under direction of the Council. This Committee shall be nominated by the Council and elected by the House of Delegates." I move the adoption of the amendment. (Seconded and carried).

Section 1, Chapter 9 of the By-laws shall be amended by adding a Committee on Relations to Public Health Administration. I move the adoption of the amendment. (Seconded and carried).

Chapter 9 of the By-laws shall be amended by adding a paragraph to be known as Section 9, and to read as follows:

"The Committee on Relations to Public Health Administration shall consist of five members and the President and Secretary of the Society *ex-officio*. It shall be the duty of this committee to confer and advise with the Director of Health of the State and the General Assembly on questions involving Public Health Administration. This Committee shall be elected annually by the House of Delegates." I move the adoption of the amendment. (Seconded and carried).

THE CHAIRMAN: Any further unfinished business?

DR. GILMORE: I have the report of the Committee of Health Insurance. I shall not take the time to read it, but I should like to have it inserted in the record.

REPORT OF THE COMMITTEE ON HEALTH INSURANCE

Your committee wishes to reaffirm the reports made at the annual meetings of the Society 1917-18 and '19. All the arguments used in the earlier reports still hold good, not one of them having been successfully contradicted.

The committee wishes to emphasize the following points:

That Compulsory Health Insurance is the most important problem confronting the profession, and that neglecting to participate in its solution will bring upon us an impossible situation.

That Compulsory Health Insurance should be judged by what it has accomplished. Here is what

has happened in countries where it has been longest in operation; in Germany and Austria, mortality and morbidity have not been reduced as rapidly as in countries not cursed with Compulsory Health Insurance laws. For instance, in spite of an heterogeneous population the mortality is lower in the United States as well as in other countries free from Compulsory Health Insurance. Also, the average days lost from sickness is lower in America than in Germany, the ratio being 6.3 days per annum in the United States as compared with 9.2 days in Germany where Compulsory Health Insurance has been in operation upwards of thirty-five years.

That workmens' wages and money per capita is much greater in America and for this reason wage earners' income is usually sufficient to provide for proper care of dependents.

That prevention of disease is not an insurance problem, but is a matter of education and proper health administration.

That our voluntary system of insurance is adequate for persons who wish it; that this form of insurance encourages thrift and fosters independence and stimulates initiative and self-reliance, which is the exact reverse of what is brought about by Health Insurance.

That the status of the Medical profession has been lowered; that scientific research has been stopped; that the people receive the worst possible medical service; that initiative and self-reliance have been completely destroyed wherever Health Insurance has been made obligatory.

We hold that the following questions are fundamental:

Can the State confiscate the services of the trained physician and still demand the best ethical standards and medical skill obtainable? We claim *not!*

We believe that the average financial return to physicians should be commensurate with the service rendered and that compensation should be large enough to induce young men of high calibre to choose medicine as a calling. With sufficient incentive to make it an efficient as well as a noble service to mankind.

Proponents of Health Insurance attempt to lead us to believe that all sickness will be relieved and all poverty removed under health insurance laws, but the fact remains that in countries having health insurance laws (Germany for instance—German Imperial statistical office 1894), statistics show that poverty was steadily increasing before the war.

Investigation of the British Insurance Act shows that the greatest difficulty in its workings (outside of certain of its voluntary insured class) is the determination of the question of receiving benefits in the case of the sick versus disablement benefit. This difficulty will always make the working of Compulsory Health Insurance laws unsatisfactory and unfair because it must necessarily take into consideration all cases of malingering, psycho-neuroses and human upsets of all descriptions not classed as physical illness, which are all important factors in the settlement

of personal differences between patient, doctor and administration.

Compulsory Health Insurance system comes in contact with so many interests of the individuals or groups who constitute society and affects them so vitally that the question must be solved in the light of a public demand or necessity, and the welfare of the people of the State as a whole.

The Illinois Commission found that the number of wage earners in Illinois on July 1, 1918, was one million eight hundred and fifty thousand, and their dependents at something over two million seven hundred thousand. The group embraced within investigations required of the Commission may be estimated at four million six hundred thousand; seven-tenths of the entire population. Speaking broadly, whatever affects the wage earners and their families is of concern to the people as a whole, and whatever affects the people as a whole, affects the wage earners and their families.

We estimate that a system of Compulsory Health Insurance in Illinois would cost its citizens annually between seventy-five and one hundred million dollars. The beneficiaries if any, would be a comparatively small portion of the population.

The only persons who are alleged to benefit from this distinct class legislation are the laboring people. It is well known that the farmer, the merchant, the manufacturer, all professional men, and the common people are against Compulsory Health Insurance. Even labor is not in favor of it.

In California in 1919, the whole state was set in favor of Compulsory Health Insurance. The legislature passed a constitutional amendment in favor of it. Senator Johnson was in favor of it. The so-called Commission to investigate the subject, composed chiefly of American Association of Labor Legislation propagandists, had reported in favor of Compulsory Health Insurance. The professional labor leaders were for it. There was an intense educational campaign extending over the entire state. When the question came to a state wide popular vote, Compulsory Health Insurance was defeated by a vote of nearly 5 to 1, and labor did not support the measure.

In Utica, N. Y., Spring of 1919, there was a campaign of education on Health Insurance, followed by a popular vote on the subject. Thirteen thousand factory employes voted on the referendum. Did they vote for it, or 2 to 1 against it, or even 10 to 1 against it? No! They voted 12,875 to 112, or 100 to 1 against Compulsory Health Insurance.

The American Civic Federation, in a report just issued by a committee headed by Warren S. Stone, the leader of a railroad union, has issued a report which refutes every claim made for Health Insurance, and proves that it has been a failure in Europe, where, under its operation sickness had nearly doubled.

Your committee holds that it was particularly unfortunate that Doctor Alexander A. Lambert and Dr. S. S. Goldwater of New York and their paid Sec-

retary, I. M. Rubinow, should have been allowed to functionate in the dual capacity as members of the first social insurance committee of the American Association of Labor Legislation and likewise as members of the committee on Public Health and Education of the American Medical Association. This situation allowed them to reflect their biased views over the members of the latter committee.

Your committee condemns as being unfair and not in conformity with the facts, the reports of the Committee on Social Insurance of the American Medical Association (of which the two gentlemen named were members), at Atlantic City, June, 1919. The last paragraph reads:

"This committee further recommends that before all legislatures in which laws on social insurance are being considered, representatives from the profession shall demand the opportunity to help mould these laws, so that the public shall not be deprived of the best medical care, and so that full justice shall be given to the public and the profession."

Note the language "mould these laws," etc., leaving the impression that the passage of the law is inevitable.

We have been hearing the statement for years that Compulsory Health Insurance is inevitable, and that the Medical profession get in the band wagon and help push the scheme along. Your committee was led into this trap over three years ago, when it started its investigation of the subject; indeed—it formulated and submitted a report along these lines; however thorough investigation and study of the subject readily convinced the committee that the scheme is a sham and that all this inevitability talk is propaganda and came directly from one source, namely, an aggregation of parlor bolsheviks who were plotting to saddle this curse on America.

We hold that the above named committee of the A. M. A., in conveying this impression acted clearly outside the facts, and certainly outside the desires and expressed wishes of the rank and file of the profession, for everywhere in the United States where Health Insurance has been agitated, there has been unanimous opposition to the scheme. Certainly, the voice of the majority of the profession should direct our representatives at all times, and these men, acting in a representative capacity should have been governed by the opinion of the majority.

Five or six years ago, there possibly could have been an excuse for this body of men deciding in favor of Compulsory Health Insurance, but today, with statistics of the German and English "fizzle" so accessible, and the resolutions of condemnation of the various State Societies so numerous, taken into connection with eight years failure of Andrews, Rubinow and others to construct a workable bill, there certainly was no legitimate reason for medical men signing such a report.

Then too, it should have been apparent to the Committee that every revision of the tentative draft from the Nicol Bill down, has been to disregard as unimportant the amount of money paid to the insured.

That the aim of the sponsors of this law is only to barter the medical care of the insured at the lowest possible price, which, after all, is the only thing they desire. To illustrate: In the first draft, known as the Nicol Bill, the provisions were for the employer to pay 40 per cent.; the employee 40 per cent., and the state 20 per cent. The next revision proposed that the State and employer pay the whole cost of operation, similar to the operation of the Workmen's Compensation Act, excepting in the latter, in which instance the employer pays all the cost.

A later proposed revision by the New York Typographers and other unions, provided that the question of benefits paid, be dropped and the act apply only to the medical care, hospital service and drugs, showing conclusively that these unions are not so anxious about the sick benefit as they are to get free medical service.

In summarizing, we wish to emphasize that Compulsory Health Insurance is *graft*, pure and simple, for the reason that the tax-payer gets no return for the money expended.

That Health Insurance is an attempt to enslave the plain people by depriving them of their rights and liberties; it is a plan to have job-holding politicians inspect the homes and dictate how they and their families shall live. The small business man is not considered—all he does is to pay the cost of operation of insurance in huge tax levies.

And, finally, we call attention to the fact that Compulsory Health Insurance is fostered by an aggregation of parlor bolsheviks and publicity seekers. That they are trying to thrust Health Insurance upon the people of America, notwithstanding the fact that it has been a failure in Germany and England and that its operation in these countries has produced conditions that would not be tolerated in America. That in the face of these facts these Bolshevists still persist in their efforts to force the measure upon us because they expect as their reward for spreading this propaganda that they will be salaried officers with administrative authority and with the tax-payers footing the bills.

Your committee recommends that the physicians of Illinois maintain an active campaign of education on Health and allied dangers, otherwise we foresee troublesome times ahead for the medical profession.

In order that there can be no misunderstanding as to the attitude of the delegates from Illinois to the American Medical Association we offer the following preamble and resolutions:

WHEREAS, A goodly number of medical men of social standing have given endorsement to dangerous unAmerican schemes and allowed their names to be used on propaganda literature sponsored by parlor bolsheviks whose energy and ambitions are directed towards Russianizing America at the earliest possible moment, and

WHEREAS, in most instances these endorsements have been given without proper consideration or investigation of the subject matter endorsed, and while

in most instances these medical men have withdrawn their support and endorsement after a thorough study and enlightenment of the subject nevertheless, such endorsements have proven valuable propaganda for the proponents of these dangerous schemes, the original impression lasting long after endorsements have been withdrawn, therefore, Be it

Resolved, that the House of Delegates of the Illinois State Medical Society caution the profession of the dangers of socializing propaganda with which the country is being flooded at the present time. That the House of Delegates express its disapproval of physicians loaning their names to unAmerican schemes (so prevalent today) before they have thoroughly investigated same and studied the possible deleterious effect the passage of such laws might have upon the people and the medical profession. Be it further

Resolved, that the House of Delegates of the Illinois State Medical Society again go on record as opposed to compulsory health insurance, and that it reaffirm its resolution passed at the annual meeting of the Society 1917, 1918, 1919 as follows:

Resolved, that the House of Delegates of the Illinois State Medical Society go on record as being in favor of State rights and express its disapproval of the attempt by the Federal Government to usurp the functions and duties that legitimately belong to the several States, and be it further

Resolved, that the delegates from this Society to the House of Delegates of the American Medical Association be and are hereby instructed to oppose State medicine, Compulsory Health Insurance, Nationalization of the City, County and State Health Agencies and allied dangerous bolshevik schemes in the next House of Delegates of the American Medical Association, and to vote only for such candidates for office of the A. M. A. as have pledged themselves to do all in their power both in Congress and in the several states in the Union to defeat all like visionary schemes that are being put forward at the present time.

Committee on Health Insurance of Illinois State Medical Society:

EDWARD H. OCHSNER,	CLEAVES BENNETT,
GEORGE APFELBACH,	W. F. BURRES,
C. A. HERCULES,	JOSEPH FAIRHALL,
E. W. FIEGENBAUM,	W. D. CHAPMAN,
H. F. BRUNING,	J. R. BALLINGER.

THE CHAIRMAN: We will now take up new business and resume the election of officers under the head of new business.

We must elect five members of a committee to be known as the Committee on Relations to Public Health Administration. Nominations are now in order.

The following were nominated and subsequently duly elected:

Dr. Ludwig Hektoen.

Dr. Harry Way, of Chicago nominated Dr. J. H. Walsh, of Chicago.

Dr. S. J. McNeill, of Chicago, nominated Dr. H. S. MacKechnie, of Chicago.

Dr. T. W. Gillespie, of Peoria, nominated Dr. H. M. Camp, of Monmouth.

Dr. Beirne, of Quincy, nominated Dr. E. W. Fiegenbaum, of Edwardsville.

THE CHAIRMAN: The next in order is nominations for the Committee on Medical Education and Hospitals.

The following were nominated and duly elected:

Dr. J. B. Fowler, of Chicago.

Dr. Ralph T. Hinton, of Elgin, nominated by Dr. Collins, of Peoria.

Dr. John S. Nagel, of Chicago, nominated by Dr. Baker, of Chicago.

Dr. C. U. Collins.

Dr. M. L. Harris, of Chicago.

DR. BEIRNE (Quincy): The following telegram was handed to me and has the approval of the Chicago men:

"Dr. Charles J. Whalen, Rockford, Ill. Please ask House of Delegates to authorize appointment of Committee of three from State Society to co-operate with Council Committee on Health Problems in Education and with State Teachers Association. Should have spoken to you about it today but forgot it. Frederick R. Green." I move that we concur in the request, and that the President appoint this committee. (Seconded and carried).

THE CHAIRMAN: Is there any other new business?

DR. GILMORE: I have the following letter that was read at yesterday's meeting and was to be presented to the House of Delegates: (Reading letter).

Chicago, Ill., May 15, 1920.

Dr. Chas. J. Whalen,
Marshall Field Annex,
Chicago, Ill.

Dear Dr. Whalen:

I have a letter from Dr. F. A. Renner of Benld, Illinois, which is the third or fourth I have had from physicians, indicating that villages throughout the State are levying a tax on physicians; in this case, \$25.00 per year for the privilege of practicing medicine in the town.

It is my opinion that no jurisdiction exists to impose such tax but the tendency strongly exists to impose it because of shortage of municipal funds at this time.

Permit me to suggest that this is a highly appropriate subject to raise at the forthcoming meeting of the Medical Society, and I hope it will be given prominent mention.

Yours very truly,

ROBERT J. FOLONIE.

DR. HUMISTON (Chicago): This is but an indication of what is in store for us if we do not nip it in the bud. The Council of the City of Chicago had such a move under contemplation. Having lost the saloon licenses and seven million dollars, they cast about for some means of obtaining money which they very much need, and one of the ways suggested was that an occupation tax be levied upon various trades and professions—professions began and ended with the doctors. The Chicago Medical Society sent a committee before that Finance Committee and said, "We will not pay any such unjust taxation. Get your money some other way." And they ceased to ask for it, as they knew they had no right to collect it and connat unless the doctors are willing. I think this Society should ask the physicians of Benld to refuse to pay it, and then furnish the necessary legal help to carry out resisting the collection of any such tax. I would like to make that as a motion, that this Society ask the physicians of Benld to refuse to pay the tax, and that the House of Delegates recommend to the Council that they furnish funds to fight it if necessary. (Seconded).

DR. TUITE: Why confine this to one town in our motion?

THE CHAIRMAN: Simply because if it is beaten in one town, it will be beaten in all towns.

DR. DOAN (Scottville): This man is in my County, and, as Dr. Humiston said, the fact that the town has recently gone dry is the cause for the trouble. The man is perfectly ethical, a member of our Society and he doesn't wish to be a slave.

DR. GILMORE: Dr. Coolley, of Danville, a member of the Constitutional Convention, is present, and has been seated this morning as a member of the House of Delegates. I suggest that we hear from Dr. Coolley on his position on Proposal 300.

DR. COOLLEY: Gentlemen of the House of Delegates: I wish, first, to thank you sincerely for this privilege. I feel that it is a question of personal privilege, and I appreciate your position and mine at this time. Let me assure you that I shall at least confine my

remarks to those who are present and the question under consideration.

Now, it is not my purpose, and I have not the ability to undertake to make any fine distinction here between questions of fundamental law and questions of legislation. Further than this, it is a well known fact to you that a constitution is one thing and a legislative act is quite another.

The history of civilization shows that we are the oldest democratic government that the world has ever seen, and as the human race develops from the little family surrounding the mother to the present time, the history has been the same. And the reason given for our existence as a government is this—our forefathers adopted a constitution, a statement of fundamental principles, the purpose of which was to conserve the rights and privileges of every individual.

All through the history of the race, there has been some outstanding man who has gathered together the forces in his country, has dominated the situation, and a monarchy has developed.

A constitution is a statement of fundamental principles to which all laws must conform, principles which will not change and cannot be changed until the people again call together men of their selection to change those fundamental principles.

We are now operating under a constitution that is fifty years old. It has been amended a very few times. We are undertaking to again draft fundamental principles to which our laws must conform or they are null and void. Laws can be changed at any time, constitutions cannot be changed at any time.

Now, with that brief statement, we approach the question under consideration at this time. No group of men are supposed to even have mention in a constitution. There is always an effort on the part of group after group undertaking to get mention.

The first thing to be considered, first, last and all the time, is the individual. For instance, a constitution guarantees a man the right of his property. Without the constitution, you have no rights to your own real estate. There has been, for instance, before this constitution, an excess condemnation principle. This means that the State may condemn your property, pay you for it and take it. That is well known. That has been in every constitution.

That constitution has heretofore prescribed with great care that the exact inch called for can be taken, and not one other inch of property.

We solemnly declare that a man may have his right to religious opinion, he can have any religion he chooses. Under this religious cloak, all kinds of fraud are perpetrated, and you realize, I know you do, that it is impossible to prevent certain frauds as long as a man hides under that generosity that the American people has given to a man's religious opinion.

And yet, when you stop to think of it, that is the foundation of our Government and that is the thing that has made us strong. The time will never come

when men will not take advantage of the rights and privileges granted them by Government.

I will discuss Proposition 300 as a doctor, from our viewpoint, and I will not for one moment admit that the time has come when it is necessary for me to demonstrate to you that I have not lost sight of your interests as a profession. I defy any man, I care not who he is or how tall he is, to tell me that I have lost sight of the interests of scientific medicine. And in this proposal, as doctors, we state a principal that to me is absolutely compatible with the best interests of the public. There is no man here who believes more firmly than do I, or who has believed it longer, unless he is many years older, that every man who practices medicine should conform to those requirements to which you have conformed.

But, have you stopped to consider that when this constitution is written, it goes to the public, and the public adopts it or the public rejects it, and every time you inject into that constitution a highly controversial question, you produce a school of people who will fight that constitution and undertake to beat it. And, in the interest of the great commonwealth, so many fundamental principles are touched upon that it is highly important that this document pass. There is an underground propaganda that is undertaking to develop every controversial point, inflame the matters at issue and develop an opposition to it.

Do you ask me why? Simply because they don't want to pay their taxes. They know how to handle the old constitution. They have had fifty years experience, and they know exactly how to evade those things, and when this turn-over comes, you will find that many intangible securities will come into the light of day, thereby relieving the man who cannot hide his property, relieving the man whose little home is taxed to the point that it is almost unbearable, and that burden will be carried by people who have escaped for years. It has really been an interesting thing to me to see the adroitness with which these controversies have developed.

Now, so far as we are concerned, the proposition that you put before that constitutional convention is right. Every man should conform to your standard as a medical man, but do you think they will do it?

Now, suppose this passes the sub-committee where it is—and just upon that point I will divert long enough to say this—that convention has been in session now four months and a half. Approximately one-third of those committee reports have been brought to the floor of the convention—there have been four and a half months of hearing after hearing, able debates, and yet those reports are not forthcoming.

Some of you admit you have not given careful attention to this question. It was presented to that committee by some gentlemen of whom I wish to speak highly, whose high purposes I do not question, whose ability is recognized all over the State, gentlemen of high standing in your profession, gentlemen who are wise and cultured and kind. But I under-

stand that complaint has been made that some one little fellow or two were not doing their duty. That question, if it is presented at all, should be presented as ably as possible, must have thorough discussion as other questions. We will suppose that it passes that committee. We will suppose it passes the floor, it goes into the constitution, it goes before the people. The people fail to pass the constitution and we again begin at the bottom, for the legislature to establish the standard of medical education, and where are we? That high standard of medical education which distinguishes it from every healer on earth, or alleged healer, that thing which is becoming an exact science, that high standard which has been developed after years and years, developed by you and men like you, will be left to the politicians of this State, and before those politicians and surrounding those politicians will be all kinds of propagandists who are never off the job, who employ the best legal talent obtainable, and I cannot see how it can fail to make scientific medicine lose its standing, lose its standard, I mean, by adopting a medical standard to which men who are not doctors can in any way conform.

It is unnecessary for me to mention the fact that there are many persons who are absolutely unable to distinguish between their chiropractor and the most highly developed medical man in the town. These are the people who will vote, these are the people who will fight for recognition of those persons when that law is passed.

A constitutional provision is a fundamental law, and says in every case, the legislature may or shall do thus and so, and automatically this question will go to the legislature. Where else would it go? Where else could it go? And that is exactly where it is now. And the moment that question goes out to the polls, the propaganda will be raised that the medical trust is undertaking to choke everybody else to death. As a doctor, I think that it what they should do, figuratively speaking. As a doctor, I think the thing to do would be to make men conform to the standards set by you, but you can surely see the impossibility of that situation when the whole question is thrown before a bunch of politicians.

That is the explanation of the view that I have taken of this question. I have discussed it among you very freely the last day, just as freely as I did my medical friends with whom I first discussed it. I have never failed to discuss it with medical men as I came in contact with them. I have written them in regard to it, expressing my opinions. My opinions are not unchangeable, of course, but with those brief remarks, I have undertaken to give you the reasons why I take the view of the matter that I do. From a purely professional standpoint, it seems to me that having reached the point we have with the legislature, that the wise thing for us to do would be to go on from here and not go back and open up this question, because I cannot divorce the interests of the general public from your interests, but I do realize, as well as you, the great army of people who

cannot distinguish, who will not distinguish, who resent every effort that you make in that direction, and fight your ideas and your ideals by fighting this document at the polls, and the ultimate adoption of this constitution is one that is highly important to the people of this state. I have enough confidence in the medical profession to believe that it is big enough to even sacrifice its interests, if need be, but as I see the situation, there is no sacrifice that will be made, because to me it seems that it is to the interest of the profession to keep your hold, because I know something about how hard it was to get.

Dr. Zelle (Springfield): I would like to ask Dr. Coolley, in the four and a half months that he has been in the convention, what he has done for the medical profession of the State?

Dr. Bowe (Jacksonville): I believe that there are many of us that will heartily agree with what Dr. Coolley has said, but I am sure that the opinion of the men in the profession who have given this matter serious thought is this, that the view of the members of the constitutional convention who are opposing this question is very circumscribed.

I vie with any man in his devotion to the principles upon which our Government is founded. The Constitution of the United States and the Declaration of Independence are the greatest documents that were ever conceived by the mind of man, and around the principles that are stated and evolved in those documents are based the various constitutions of our sovereign states.

Those who seek special privileges before this constitutional convention are trying to evade and divert this question by stating that it is a question of legislation and is not a constitutional matter. And, as I have just said, with my great respect and regard for our constitutional form of Government, yet in view of what has occurred in the last few years, it must be apparent that as long as mortal man exists, his vision will be limited, circumscribed, incorrect, and things done today may not be adequate for tomorrow.

Just so in this very question that is before us. We are not here asking for any special privilege for the medical profession, for any individual or group of men. We come before the people of the State of Illinois as the first friend of humanity and the first friend of our Government to which we yield allegiance second to no class of men in this country.

I wish that Dr. Coolley would kindly take this message back to the constitutional convention—briefly call their attention to what has happened in the past few years. The full requirements of the Constitution of the United States were called upon to meet the emergency of the great World War. Where it was inadequate, it was interpreted to do such. Here is a question that is based upon material fact. Here is a great medical profession that has existed since civilization. It brings before us all that has been contributed by the civilization of the world. It brings before us material fact. It brings before us constructive fact. It brings before us constructive ac-

complishments. When the World War went on and our Allies were involved, they were exhausted as to medical men. We entered the war; then the burden was clearly up to the medical profession of this country, and the greatest factor, and the factor that won this war, was the position and the attainment and the ability of the American Medical Association and its component members. You know that, gentlemen, it is a fact that is recognized by the world.

I want to say to you gentlemen of this House of Delegates, if the vision of the Illinois constitutional convention is so circumscribed and so warped by the champions of those who are seeking special privileges, who are seeking to cloud and to controvert great material facts that have recently come before us, who will suffer but our Government?

There is not a more destructive influence in this country today than the very influences that are fighting this question before us. It must be apparent to every thinking, intelligent person in this country who has studied this question, that one of the essential factors in our national defense in war, in peace, is an educated, intelligent, constructive, progressive, patriotic medical profession.

I have heard from the members of the constitutional convention. Their attitude is largely as stated by Dr. Coolley. It is a matter of evasion. This is clearly a constitutional matter. We are asking for no special privileges or anything of that kind. I am sure there is not a man in the medical profession, if his material existence depended on it tomorrow, that would not subvert his personal interests to the interests of his country. We have proven that. And I say to you, gentlemen of this House of Delegates, that just as sure as this present trend of thought, this wholesale epidemic of advanced Socialism and personal privilege progresses in this country, our profession will deteriorate, become less and less; we will degenerate in our ideals, and we will become an ineffective profession and a poor asset to our government.

Therefore, the one matter that I wish that Dr. Coolley would take back to this constitutional convention is our attitude in this matter. We should present a militant front, and that should be presented in a way that our attitude will be made clear, that it is not our fight.

Personally, I have become so exasperated in these matters that I have often thought that the public should sink in their own filth, but every man should arise to this occasion and subvert his personal interests to the interests of his country, and just as sure as that constitutional convention and similar bodies ignore facts, ignore history, ignore the accomplishments of education and civilization, we will fail.

This isn't a question of anybody's interests, it is a question of right or wrong. Are we going to compromise our position, are we going to side-step on a great moral question? There can be but two sides on a moral question, right and wrong, and we are right on this question. We have demonstrated it and his-

tory has demonstrated it. Are we going to sidestep or make any compromise in this question as it now confronts us? I tell you, gentlemen, this is an hour in history, and it is a chance for us to establish a precedent here, and personally I believe in standing firm for truth.

The time may come in this country, if this thing continues and these cults and paths and other organizations exist, when the Government may have to draft, enlist men in the medical service and carry on a system of medical education to preserve the citizenship of this country. I thank you.

Dr. Collins (Peoria): I would like to make just one correction in Dr. Coolley's remarks. He spoke of this country as a democracy; it is not a democracy, it is not an autocracy, it is a republic, and those of you who have read Henry Atwood's recent book will understand what I mean.

Now, the medical act under which we are operating in Illinois was a compromise in which the drugless healing folks were allowed to practice in this state. It would have been all right if they would just stay put. We know that in the last meeting of the legislature, the osteopaths came in there and wanted to practice medicine just as we do, the chiropractors wanted to do the same thing. So we have had that fight for years, and the fight is getting worse.

It seems to me that this principle in Article 300 ought to be settled by the constitutional convention, and be settled right. I believe we ought to stand by the resolution that we passed yesterday.

Dr. Hercules (Chicago Heights): I had no notion of speaking upon this subject, but a few thoughts have come to my mind, and I would like to refer to one little incident that happened in Congress and Uncle Joe Cannon's answer to it. Uncle Joe had tolerated their political moves until he couldn't tolerate them any longer. There was a principle at stake, and when they got through, in answer to it, he said, "Ah! fudge!"

Now, that is my notion. I believe first in principle. I believe in the Declaration of Independence. I believe it was a principle before our constitution. I remember but a few words of the Declaration of Independence—"These rights we hold as inalienable, life, liberty and the pursuit of happiness." Property rights came second. I believe the greatest asset to our country is the lives of our individuals, and who besides the medical men are doing more to perpetuate that one thing? Therefore I believe that we ought to inculcate our principles. We are not asking for special privilege. We are asking for freedom from the charlatan and the ignorant.

Dr. Nelson (Springfield): I expect to say but a very few words, because there are so many in the convention who are more competent to discuss this question than I. But Dr. Coolley brought forth some arguments which couldn't help but make an impression upon me.

One of these arguments, of course, was one thing with which we are all familiar, and that is that the

constitution is but a fundamental principle. We all know that, and that is just what we want in the medical profession. The legislature has met biennially and they have thrashed this question over and over, and it has simply been a hold-up to the medical profession of Illinois every two years.

Dr. Coolley states that if this Article 300 is placed in the constitution, that his fear is that it will nullify our present medical practice act. If it should absolutely nullify the present medical practice act, how many of you gentlemen would fear it? If that medical practice act was wiped off the statute books, I don't think any of us could see any difference in our daily profession. But I wouldn't like to see it, of course, nor do I think that it would accomplish that.

But Dr. Coolley comes forward with another argument, that it would not only nullify the present act but that the legislature would have power to place the standard, and they would place it so low that it would bring us down to their level instead of elevating them up to our level. Granted that that is true. Dr. Coolley says that through the efforts of the medical profession of Illinois, we have succeeded in putting on our statute books the present model, as they call it, medical practice act, which Dr. Drake said the other night was the best in the United States. If that is so, if through the efforts of the medical profession, they have succeeded in establishing and putting on the statute books this model practice act, couldn't we, with that same force and influence, if the legislature dared to lower the standard, bring that standard up to where we demand that it shall be?

What we want is a fundamental principle, that only one door shall admit anybody to practice the healing art. With that fundamental principle, leave it to us to force the legislature to make the standard and we will get busy. If we forced them to put that model medical practice act on the statute books we can force them to make a standard.

There is one thing, Dr. Cooley, that I would like for you to bring back to that constitutional convention. My friend, Dr. Bowe spoke about when this world was in war and they needed the medical profession, and it is an admitted fact that the world is indebted to the American Medical Association more than any other one factor for the termination of this war, and when this crisis came, who did the Government call upon? Did they call upon the Christian Scientists? Did they call upon the osteopaths? Did they call upon the chiropractors? No, there wasn't one of them that was permitted to carry on this war in any official capacity. You all know that. Do the members of this constitutional convention ever consider that fact, Dr. Cooley?

If these chiropractics, these osteopaths, Christian Scientists, etc., are permitted to carry on the healing art and they are tolerated by the public, why doesn't the public recognize it and in case of a crisis like our late war, why don't they recognize them and call upon them? I want to go down for a principle, and

I hope that this convention will stand on this question right and go down to defeat rather than waiver one iota.

Dr. Burkhardt (Effingham, Ill.): I recognize the fact that this is getting to be rather tiresome, but I will make my remarks very brief. I can not or could not feel contented, my conscience would not feel clear, if I didn't express myself at this time upon this question.

I feel as the other gentlemen feel in regard to Proposal 300. We all know that a constitution is a letter of instruction, you might say, from the people to the legislative representatives of the people, that they can go thus far and no farther in regard to legislative matters, and that they give them, you might say, so much of their power—that is, the people's power—and no more.

Now, admitting, as Dr. Nelson has said, if the acceptance or putting into the constitution of this state Proposal 300 should result in the wiping out of the present Medical Practice Act, it can't damage the medical profession nearly as much as it would damage the medical profession if Proposal 300 had not gone into that constitution. So, it seems to me the only safe thing for the medical profession to do in this crisis, and I consider it a crisis, a critical period at least, in the history of medical legislation in this state, because now is the time we must get what we want, or the medical profession will have to drift along the same lines for another fifty years perhaps, until another constitutional convention is called.

Now, speaking of the present Medical Practice Act, it being a model act, with all due respect to the powers that are administering it, if it is a model practice act, if it is the model among all the states of this union, I say, God help those that are lower, or, I mean, God help the rest of them if this is the model.

You all know as well as I do that the state is infected, and very much infected, throughout its whole territory, by quacks and charlatans, and if it is a model practice act the administration of that act is indeed very inefficient—that is what I have to say in regard to the present Medical Practice Act.

I am close to St. Elmo, Illinois, where they are coming by train loads, not only from the State of Illinois, but from other states, on crutches and so on. There is a man there who has made two or three fortunes, without any investment, without any education. The only superior knowledge he claims, or reason he claims for possessing the power to treat the sick effectively, is that he is the seventh son of the seventh son. So, I don't know how he comes under their Medical Practice Act, how he gets the authority, but he seems to have the authority to take in the money.

Dr. Sloan (Bloomington): I believe with Dr. Bowe we ought to have a militant front. Jumping onto two or three of these men and sending them down, even if they do exactly as we instruct them to do, is not my idea of a militant front.

I was talking to one of the members of the constitutional convention ten days ago in regard to this very question. "O, hell!" he said. "You claim to have six thousand five hundred physicians in the State of Illinois and you can't control fifteen hundred votes to save your life. You can't control fifteen hundred votes out of your own profession and you can't control anybody else's." And he is almost right.

Now, the general practitioners of the State of Illinois—surgeons can't control so many votes—but the general practitioners of the State of Illinois, especially since the women can vote, can control every single election if every general practitioner will get together. We have a committee on legislation to go down and work on the legislators, but we haven't any committee to get out here and control votes, and they don't pay any attention to us down in Springfield because we don't control votes.

If we had been controlling votes for the last two or three years we would have put the fear of God into their hearts and we could have anything we want. What Coolley tells them when he goes back is going to amount to very little. He is only one of them. The others are going to do just as they please, and they are going to consider the profession of the State of Illinois in the light of fifteen hundred votes.

Dr. Humiston: *Mr. Chairman and Members of the House of Delegates:* For lack of powerful phonation I must apologize, but I shall attempt to say something and to take up seriatim the points touched upon by Dr. Coolley.

I wish this House of Delegates to know a little about how this Proposal 300 came to be introduced and apparently so precipitately. It was in preparation for some time, but the attorney for the society was out of town and it was not prepared until about the time it was introduced; and then, being a member of the committee charged with the important duty and responsibility of seeing something done or attempted in this convention, I discovered in one of the evening papers that only forty-eight hours remained in which to get a proposal except upon unanimous consent.

Do you suppose unanimous consent could be had in that House of Delegates for the introduction of this? Two doctors in that convention would object to it. One of them has objected here this morning on grounds he thinks are good, and our friend, Dr. Whitman, of Belvidere, has objected publicly since. We could not get in there for the two doctors, not counting the Christian Scientists.

It was necessary to arrive. The only way to get that before the convention, it seemed to us, and I counselled with several, was to telegraph it. The telegraph company refused to sign my name in the middle of the message and consequently the preamble got into the telegram as part of Proposal 300. It doesn't belong there and I so stated in my opening remarks to the committee before the convention and explained it. They understood that. They were asked to rewrite it if it was not in proper form.

The question as to whether this is legislative or a

constitutional matter is open for discussion. I will quote you a letter from the chairman of the constitutional convention—quote from it, not read it all. If I were to read you all the letters I have here it would take a long while, and those I have in my grip—not a very considerably small number of which are letters from Dr. Coolley—which have been forwarded to me, to show us who are our friends and who are against us.

I want to say further in the manner of this introduction that as soon as Chairman Woodward received it he sent for Dr. Coolley, and I do not wish to represent—I would regret very much misrepresenting anything in the way of fact, and I desire to be corrected if I do. Matters of opinion are my own and I stand for them. He sent for Dr. Coolley and in his presence he wrote this letter, which meets Dr. Coolley's approval and of which he has a copy.

I will not attempt to read it all except that he says the matter is, in his opinion, a legislative affair. And then he further says, "The state constitution is a limitation upon the powers of government. The federal constitution constitutes a granted power to the government. The state can exercise all the powers of government not prohibited to it by the state constitution."

What in the world does this mean here beginning on line six in the middle of Proposal 300 when it says, "No power shall exist to impose hereafter any terms or restrictions or give power to any person or persons to treat or undertake to treat any ailment, infirmity, or disease of another for pay, reward, or compensation upon any different terms, limitations, qualifications, or present requisites from those granted or limited to every other person or persons who may hereafter be licensed to undertake to treat or cure the sick or infirm, or to preserve from sickness or infirmity persons within the state."

The object of that thing and the one thing which Judge Hill, speaking for the Christian Scientists, admitted was constitutional material, and we have a stenographic report of the debates that took place there before that committee, and he admitted that that part of it was a limitation of power. That is the part we want. We want to fix it so that the legislature cannot traffic in human lives, and cater and sell out, peddle out, the privilege of treating the sick in Illinois to anyone that can get their ear through a lobby.

As still further evidence of the good faith in which this thing was received down there, I desire to say that it was telegraphed in to reach that convention on the twenty-fifth day of February, that this letter informing me that the chairman of the convention could not, of course, introduce the thing. Dr. Coolley had knowledge of the fact that it was there, that it was begging for a sponsor, and I called up on Friday, the last day in which it could be introduced, and secured its introduction through a representative in the constitutional convention, one of my nearest neighbors, and he introduced it for us.

This letter telling me that it could not be introduced in the way in which we did was very considerably written. It was mailed about four or five or six hours after it was too late to take advantage of it, and it still had to make the trip from Springfield to Chicago. That is the kind of encouragement we got when it did arrive.

To show you that Dr. Coolley's first impression of the matter has not persisted, that his opposition has grown and wobbled and changed into something different, I desire to read an extract or two from his own letters. It was in reply to a letter urging him to support this, and it says, "The first attack was made by the medical freedom people with a ridiculous article which is enclosed to you. For fifty years they have had the power—that is, the legislature—for forty years has the medical profession been trying to get from them decent medical legislation. The result is well known to you. The constitution is all right on that point as it is and the best we can do is to let it alone. Why Humiston and his friends should send that telegram and stir up every personal liberty crank on earth just as they were sleeping sweetly I cannot understand. Now it is up to them to come down and see it through."

We have offended the personal liberty men and aroused them to action. Here is the *modus operandi* of arousing the personal liberty cranks and the League for Medical Freedom. On nearly the last day in which this could be introduced in the convention it was introduced. It had such an arousing power that on the 19th of January, over a month beforehand, the legislation for medical freedom got busy and asked for special privilege. I will admit that it has had wonderful effect. It had a retroactive influence. Before the thing was born, for a month it began to exert its baneful influence upon the League for Medical Freedom.

Dr. Coolley: I didn't understand that.

Dr. Humiston: I do wish to be fair. I should regret exceedingly to stand here and in any way misrepresent your position. I am sorry that it is what it is, and I hope we can influence you in improving it. I say that in your letter you stated that this thing had aroused the League for Medical Freedom, or these personal liberty cranks, and then I said the influence must have been wonderful because the League for Medical Freedom had been in action over a month and it must be a wonderful influence on the 25th of February to cause the introduction by these quacks and would-be sponsors for everything crooked to cause them to introduce something on the 19th of January.

Dr. Coolley: Mr. Chairman, that is exactly the situation. They had been before the committee—that answers this gentleman here—they had been before the committee, had been in Springfield almost constantly since the convention convened, and had subsided apparently until this matter came forward, and then they came back. That was the situation exactly.

Dr. Humiston: I think it would be only courteous

to Dr. Coolley to let him reply when I am through. I don't mind the interruption in the least. It doesn't break the thread of this story, as it is such a long one, and it has so many ends that you can't pick it up in the wrong place. But when I am through I am perfectly willing to listen to any corrections where I have made a mistake in interpretation and to anything that looks like a misrepresentation of facts. There is no misrepresentation intended, and when I read his letter, if there is anything wrong with it, over his signature, we will let him revise it if he wants to.

Now, with reference to the underground influences, forces that are working against the constitution, underground influences that we should listen to are those which should be in favor of putting this Proposal 300 into the constitution. We should stand beside and visualize the untimely graves that have been filled through this vicious cult known as the Christian Scientists. Their numbers are almost numberless. There is not a community where you live and work where you can not point to many such instances where diseases which are curable by the means at our command have been permitted to reap the harvest of death, and the innocent children are the sufferers.

I would rather be right or wrong, whichever side you put it when it comes to splitting hairs about legal questions and be on the side of the innocent children that are sacrificed on the altar of vicious and crazy notions of this kind than for the love of money and of little else.

Just the other day—within ten days, less than that—there was a verdict of guilty of manslaughter, or one of the forms of verdict covering murder in New Jersey against a father who permitted his child to die of diphtheria without calling a medical man in attendance. If we have the best law there is in the United States on governing medical practice, let us swap it for the one they have in New Jersey.

In Ohio the Christian Scientists cannot charge for their business—it is a business. They know it is a business. It is only the business side of it, the mercenary features which are attacked here. It is treating for pay and maintaining offices and doing things of that kind which is aimed at in this. There is nothing about the religion, if they want to call it that, which is an issue in any way. The bill of rights has nothing to do with the business of this kind of getting money.

If they wish to avail themselves of the constitutional amendment—and they quoted the fourteenth of the United States—why don't they quote the first on the religious proposition and go into Ohio and say: "Here, the first amendment to the Constitution of the United States says that we in our religion can go out and gouge the sick and cover ourselves and bedeck ourselves with silks and satin and feathers at the expense of the sick that we have hornswoogled into thinking that we can treat by absent treatment."

In many states the Christian Scientists have had

decisions saying that it is a constitutional right which they enjoy in connection with what they call religion to treat the sick, and Judge Hill admitted that that was the basis of these decisions that I sent to him before the committee—Dr. Coolley was present. Then if it is the constitution that is at fault, in the name of Heaven, let us amend the constitution and get at them.

If it is in the hands of the legislature to do what they please now, and after this is changed, or should it be changed, what if we lose? We have lost simply this—a few barnacles and a great many of these criminals who are nothing less than moral murderers, who treat the sick without knowledge and promise to cure incurable diseases—we have lost simply that. We lose the Medical Practice Act. With it we lose Exemption No. 5 of Section 20—the one spot of gangrene and a stinkpot of iniquity that we would be much better rid of and be better off with no Medical Practice Act at all if we are going to license criminals to do what they please without any medical or educational qualifications whatever.

Medical education has not been established by law. The law has dragged along behind. The medical education has been put up where it is by the doctors, and they are not going to let it down if the fifty-seven varieties of lawyers and two medical men in the constitution help us out or if they do not.

The Department of Registration and Education in Illinois is requiring now with the consent, co-operation and approval of the medical colleges—they are requiring three years more than the minimum that is set forth in this model medical law, the like of which was never born before. We are already three years above any such medical practice act. Do you suppose the universities that are doing medical education are going to wait until Springfield votes that a little lower in order to drop? No, they are three years above it already, and they will be higher than that pretty soon.

I am not at all worried as to what would happen. I think I ought to read a letter from Dr. Hektoen to Dr. Coolley on this very point. Dr. Hektoen, I dare say, most of you know by reputation. I do not need to tell you that he is one of the greatest men in medical education and in the medical profession in this country, one of the lights in pathology, one of the best ever produced by Illinois.

"It seems to me that the reason we have fared so poorly at the hands of the legislature in the past is that we have assumed a defensive rather than an offensive attitude in regard to many special measures providing for licenses in medical practice in some form or other. Proposal 300 marks a definite change in this attitude of medical organizations and notice is being served on all parties concerned that from now on the war will be carried right straight into the country of the enemy rather than confined to minor skirmishes on the border.

"If Proposal 300 goes into the constitution a great principle will have been established. That a revision

downward of the present standards necessarily would follow I am not ready to accept as an unavoidable consequence. The same elements that would carry this principle into the constitution would still dominate the situation. And even if these should result in some changes in the present standards, I believe that the benefits from the incorporation into the constitution of this new principle in the end will outweigh any possible damage from such changes."

That voices what I would say on that point. I believe that Dr. Coolley's alarm on that point is sincere. I do not believe it is well founded. I neglected to say under the point of introduction that Dr. Coolley told me that he resented somewhat the precipitate way in which this was introduced and the manner of its introduction. I think he was satisfied with the explanation which I made to him, that it was a matter not of showing discourtesy to the members of the medical profession who were there, but a matter of necessity, due to the things which I have outlined to you.

If I did not make that plain I want to make it plain now, that it would not have been in there at all if it had not been done in the way in which it was.

Now, I have interviewed many of the leading religious denominations of this country. I have gone to the topmost point. I am not going to state names and places and personages because I do not wish to cause embarrassment, and anyway, you would have to take my word for it. But I have been to Jew and Gentile, to Protestant and Catholic, and with one accord they say, "Proposal 300 is right." And for my part I know of no higher rule of action than to know that a thing is right. And if there is any grounds at all in which a move is feasible, we should make that win or lose.

There is one unfortunate thing in connection with this. My written report criticized nobody. If it had not been injected into this House of Delegates, a discussion of this thing from other quarters, there would have been no occasion for any criticism of anybody. You may not call it criticism—take that as you please. Facts are all that I wish to recount to you just now. After this had been introduced to the committee on miscellaneous subjects, of which Dr. Coolley is a member and was present, and he showed me every courtesy, asked me to take a seat beside him—his cooperation ended right there.

I wished him to ask some question. He said he didn't care to ask any questions. He didn't ask any that I requested him to. That was a matter of judgment, and I haven't any criticism to make on that point. He may have known the people there better than I. But there arose from a seat a member of the convention by the name of Dr. Whitman, of Belvidere. As a member of the convention his opinion carries weight, and he addressed the committee, directing most of his remarks—that is, the Committee of Miscellany—directing most of his remarks to me and questioning my right to appear there in the name of the society, discrediting your representative and

Council for sending me there, and in every way made a speech which was highly satisfactory to the Christian Science lobby, which packed the place.

The motives for that you may as well guess as I. I do not understand how a member of the medical profession could come in there and question the official acts, organized as we are, knowing that it was impossible to consult every individual member of this society in the State of Illinois, could come in there and discredit your representative, thereby the authority of your Council, and sent there for this particular purpose, as they knew exactly what was being presented.

I want to say that I learned from those members of the committee that are favorable to Proposal 300 that his talk there, a member of the committee, and a doctor especially had a very unfortunate effect and is the worst thing they have to combat in getting this thing through. I have had it told me time and again that if the doctors in this convention were as heartily in favor of it as our man Whitman was against it, it would certainly go through the committee with the majority report with a good chance of being adopted.

That is a matter of opinion. It comes from more than one member of the convention, and also comes the statement from another member of the convention, which can be corroborated here, that he was against it because Dr. Coolley was not in favor of it, and thought it emanated from Chicago and was put up by a few men and did not voice the opinion of the medical profession. And this man said, "If your representatives in the convention are not in favor of it, why come to me about it?"

Now, I do not assert or expect that Dr. Coolley and Dr. Whitman represent this society, that is, they are not representing this society in that we elected them as our representatives in the convention. Therefore they are not responsible to us for what they say or do, but I do say that Dr. Whitman is responsible to this society for discrediting this society and succeeded in it, in a talk before the committee, saying we had no right to present such a thing and it did not represent the wishes of the society.

I offer no comment whether anything should be done or anything further said. I recount the fact. The personal attack upon me I take as a compliment. The enemies that one makes sometimes are a tribute to his character and what he stands for.

Roosevelt said among the many things that he said, and said so well, "I have less fear of my enemies than I have of my fool friends."

I believe that if the Committee on Miscellany, and some of them are absolutely opposed to putting anything in the constitution on this subject, and I think I may once more voice an opinion—now this is my opinion—that the reason this thing is not easy is because they do not wish to stir up the political antagonism of these organized lobbyists who are there from one year's end to another when there is anything to do, who spend money liberally; and the po-

litical makeup of this convention is not greatly dissimilar to that of the legislature, and they are afraid of these people, and political cowardice is the reason they don't come out on the right side of this moral question. That is my opinion.

They are afraid to stir up the religious question. At Dr. Coolley's suggestion, we have had two substitutes prepared, and I don't think very much of either one of them. One of them puts the one word "health" into the bill of rights. These proposals are not worth the time to take anyway. There is no motion before this house that I know of.

I would like to say more. You know my position. The answer to Dr. Whitman took place in the election a little while ago. My sentiments were known, and I expect to carry out the wishes of this House of Delegates in doing the best I can to organize a political committee in every one of the hundred and two counties of this state, to show the members of the legislature that we do have a little sting in us after all.

Dr. Coolley: You all concur with me in everything that has been said of a complimentary character to the medical profession, what it stands for, what it is. This is nothing more or less than a difference of opinion about how to get what you want. And, after all this, I must admit that I fail to see why we should undertake to run this gauntlet through these committees, through the convention, out before the polls and come back before the same legislature. It is only a matter of opinion—that is all. And I will say to you, as doctors, if this ever comes to a fight down there you have nothing but my support, whatever it amounts to, but step after step, you expect to go and come back to the legislature.

Somebody said here that the present law was a compromise. That is true, and a very, very hard one to get. When you open this question before a legislature to reestablish the standards and what it will be and who it will take in and who it will not, talk about doctors as politicians—why, some of these cults can make us look like thirty cents.

When they go to the polls it is not the fellow's money invested; it is every patient, every friend. The propaganda that will go out over this state was one of the strongest that ever went against any proposition in the world.

After this is all accomplished that you are asking, after it is written in the constitution and the document adopted, and you come back to the legislature, you are in a position that I have believed and firmly do at this moment believe will be unwise and hurt your position instead of helping it. That is all there is of it, but if you undertake to present this, give it an able hearing.

Now, as far as these letters are concerned, I am glad they were submitted. They simply say what I have said here. The first thing that came before that convention was the medical freedom people. The gentleman asked what I had done for the medical profession. I don't even claim to have defeated that

thing because I think the committee before which it came, of themselves, without a word from any medical man on earth, after hearing their position stated, would have done just what they did do.

Everything subsided, so far as that question was concerned, and my letter—I don't even admit that it was unwise; it simply stated to a medical friend of mine the fact that they were again stirred up and down there—that is all. And they have been there ever since. They have been there to meet anything and everything—that is their religion; that is the way they get what they want. And you take it from me, now, if the time ever comes when you go before the legislature—and I want to go on record here as saying that if the time ever comes that you go before the legislature to re-establish your standard of medical education—the medical profession will get the worst of it.

The Chairman: Speaking for the medical profession, I think as chairman I have the right: There is a difference of opinion in politics. In my address yesterday I said that Dr. Lambert said that the medical profession did not know what was good for it and he was willing to take that position. Dr. Coolley insists that we don't know anything about politics. Well, boy, let's find whether we do or not.

The Resolutions Committee will now be heard from.
READING OF RESOLUTIONS

RESOLUTIONS PASSED AT THE 70TH ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY, HELD AT ROCKFORD, MAY, 1920.

AGAINST COMPULSORY INSURANCE AND ALLIED DANGERS

WHEREAS, A goodly number of medical men of social standing have given endorsement to dangerous un-American schemes and allowed their names to be used on propaganda literature sponsored by parlor bolshevists whose energy and ambitions are directed towards Russianizing America at the earliest possible moment, and

WHEREAS, In most instances these endorsements have been given without proper consideration or investigation of the subject matter endorsed, and while in most instances these medical men have withdrawn their support and endorsement after a thorough study and enlightenment on the subject, nevertheless such endorsements have proven valuable propaganda for the proponents of these dangerous schemes, the original impression lasting long after endorsements have been withdrawn, therefore, be it

Resolved, That the House of Delegates of the Illinois State Medical Society cautions the pro-

fession of the dangers of socializing propaganda with which the country is being flooded at the present time. That the House of Delegates express its disapproval of physicians lending their names to un-American schemes (so prevalent today), before they have thoroughly investigated same and studied the possible deleterious effect the passage of such laws might have upon the people and the medical profession, be it further

Resolved, That the House of Delegates of the Illinois State Medical Society again go on record as opposed to Compulsory Health Insurance, and that it reaffirm its resolution passed at the annual meeting of the Society, 1917, 1918, 1919, as follows:

"Resolved, That the House of Delegates of the Illinois State Medical Society go on record as being in favor of State Rights and expresses its disapproval of the attempt by the Federal Government to usurp the functions and duties that legitimately belong to the several states, and, be it further

"Resolved, That the delegates from this Society to the House of Delegates of the American Medical Association be and hereby are instructed to oppose State Medicine, Compulsory Health Insurance, Nationalization of the City, County and State Health Agencies and allied dangerous bolsheviki schemes in the next House of Delegates of the American Medical Association, and to vote only for such candidates for offices of the A. M. A., as have pledged themselves to do all in their power both in Congress and in the several States of the Union to defeat all like visionary schemes that are being put forward at the present time."

COMMITTEE ON HEALTH INSURANCE OF ILLINOIS STATE MEDICAL SOCIETY.

STATE RIGHTS IN HEALTH MATTERS

WHEREAS, There is a growing tendency in our National Congress to invade the authority of the states by the introduction of bills authorizing various departments of the Federal Government to exercise public health functions and duties properly belonging to the states, and

WHEREAS, There is an equally dangerous tendency in our own state towards the assumption

by voluntary and irresponsible extra governmental agencies of powers and functions properly belonging to the legally constituted Health authorities, therefore, be it

Resolved, That the Illinois Medical Society disapproves of any action whereby the Federal government attempts to exercise authority over health matters in any state except insofar as questions of National or interstate importances are involved and that we urge that the regulations of all State Health matters be under the direction of the legally constituted Health authorities of the state as the representative of its citizens in health conservation, operation, and be it further

Resolved, That we condemn the principle of Federal State aid as pernicious and dangerous; that it is an encroachment on the functions of the state and an invasion of State authority tending to the demoralization of State Public Health work, rather than its development.

DR. BISHOP PERSECUTED

WHEREAS, Dr. Ernest S. Bishop, Clinical Professor of Medicine, New York Polyclinic Medical School, a very eminent physician and authority on Drug Addiction, has been arrested for alleged violation of the Harrison Anti-Narcotic Law, and

WHEREAS, Dr. Bishop more than any one man in the world has contributed to the scientific literature of the subject during the past eight or ten years. That no other man has worked upon the subject of Addiction in communication and active co-operation with so many of its diverse angles and manifestations, and

WHEREAS, The personal sacrifice that he has made in his work are well known to very many people. That the opportunities for capitalizing his work and reputation and his refusal to avail himself of such opportunities are well known, and

WHEREAS, His nine years of writing culminating in his new book, "The Narcotic Drug Problem," has been the clearest exposition of the scientific and other materials of this condition in medical print. His professional attainments, titles and connections guarantee his standing personal and professional, and

WHEREAS, This matter is of great importance to the medical profession, to those suffering from the disease of addiction, and to the public, and

WHEREAS, It has been at all times very evident to those who have watched operations of a certain coterie of New York Doctors that the theory Dr. Bishop propounded would make enemies. That he was bound to tread on a number of mercenary corns. In this connection we would like to ask why he has been badgered in season and out of season by threats from high places to get him if he persisted in flouting his views that drug addiction is a disease. That it is generally known by many, physicians high up in their profession in and about New York are financially interested in a stylish Sanitaria which exists to treat "dope fiends" and extract enormous fees for fake ministrations and pretended cures. Perhaps, an unbiased Congressional investigation of this institution will show the reason for Dr. Bishop's arrest.

WHEREAS, If anybody had any doubt beforehand as to the motives which underlie the arrest of Dr. Bishop they should certainly be convinced after reading the report of the testimony of the hearing of the Cotillo Bill in Albany, New York, April 15, 1920. At this hearing judges from New York, the District Attorney from the Bronx and other prominent laymen brought out insinuations against a coterie of physicians interested in a certain stylish "Dope Fiend Sanitarium," which to say the least was far from complimentary and which certainly left a very bad impression on the audience and the newspaper men present.

The outcome of the Cotillo hearing has left such an unfavorable impression throughout the country that it calls for a Congressional investigation of Opium Addiction and its proper control. The unfavorable impression left at the hearing of the Costillo Bill was so confirmatory that Senator Cotillo, sponsor of the Bill, at once withdrew his support and refused to have anything to do with it.

WHEREAS, We believe the arrest of Dr. Bishop was a mistake and that if the law was violated at all the violation was merely technical and not intentional, therefore, be it

Resolved, That the House of Delegates of the Illinois State Medical Society express its confidence in Dr. Ernest S. Bishop, and in his work along the line of an attempt to better the condition of "drug addicts," and be it further

Resolved, That a Congressional investigation

be instituted at the earliest possible moment and that it be conducted vigorously by a committee of unbiased men in order that we may determine the rights of medical men under the present anti-Narcotic Law, be it further

Resolved, That a copy of these resolutions be sent to Dr. Bishop and that a copy of same be sent to the Department of Internal Revenue, Washington, D. C., and that a copy be sent to each of our Senators and Congressmen.

AGAINST ADVERTISING THE CHARLES B. TOWNES INSTITUTION

WHEREAS, Charles B. Townes, a layman of New York, has for several years been making a Punch and Judy Show of the medical profession, and

WHEREAS, Said Charles B. Townes has often boasted that he is the father of the anti-Drug Legislation in this country, and

WHEREAS, There has been much criticism of late of the Charles B. Townes Hospital management, New York, both in connection with attempted drug legislation in that city as well as to the motive which underlies the activities of the owners of this institution, and

WHEREAS, The result of the hearing of the Cotillo Bill, at Albany, N. Y., April 15, 1919, left a very bad impression in the minds of every one as to the motives of some of the people interested in the Townes Institution when they introduced the Cotillo Bill, and

WHEREAS, Great publicity has been given the Townes Hospital in the lay press, notably, *McClures*, *Outlook*, *Physical Culture* and others; much of this publicity being very spectacular and very objectionable, therefore be it

Resolved, That the House of Delegates of the Illinois State Medical Society request the American Medical Association officers to discontinue further advertising of the Townes Institution in the *Journal*.

ILLINOIS SOCIAL HYGIENE LEAGUE

WHEREAS, The Illinois Social Hygiene League in January, 1920, asked the council of the Illinois State Medical Society for its sanction to hold a meeting of the league at Rockford at the time of the annual meeting of the State Society (May, 1920) and

WHEREAS, The council was not in possession of

information as to the purposes of the League, approval of the request was withheld and

WHEREAS, The superintendent of this league reported to Assistant Surgeon C. C. Pierce, Washington, D. C., that sanction of the council of the Illinois State Medical Society had been granted and,

WHEREAS, because of this false statement said Dr. Pierce consented to come to Rockford and address the League and

WHEREAS, Dr. Pierce did send a representative to Rockford and who upon learning the real facts refused to address the League, therefore be it

RESOLVED, That the President of the Illinois State Medical Society appoint a committee of three to investigate the aims and purposes and necessity of this League and report to the Council.

Approved.

CORONER OF COOK COUNTY

Dr. Wm. D. Byrne:

In order to promote the more efficient administration of the law and in keeping with modern methods of business, your Committee on Resolutions advocates the abolishment of the office of Coroner in Cook County and recommends in its stead the creation of the office of Chief Medical Examiner, whose duties shall be the same as those of the Coroner, as they appertain to cases of violent and accidental deaths.

The New York law, in effect January, 1918, is a model that Illinois might very well follow, as it places the investigation and handling of such deaths where properly they belong—i. e., in the hands of the medical profession, which by knowledge and training is exceptionally qualified to direct this very important department of civil life.

Immediate action on this proposition is recommended, that steps may be taken at once to bring about the desired change in the organic law while the Constitution is under revision.

Wm. D. Byrne, Chicago.

All of the resolutions were adopted.
Adjournment.

Filth creates flies; cleanliness creates comfort.

The summer resort with unscreened windows and a suspected water supply is a place to avoid. One doesn't go on a vacation to come home with a well-developed case of typhoid fever.

During the hot summer days make every effort to keep the baby cool, clean and comfortable. Babies will not fret and cry except they are sick, hungry or uncomfortable. And don't forget the frequent drink of a few spoonfuls of cooled, boiled water.

Give the baby its daily bath. After partly drying with a soft towel, pat its body gently until dry and rosy. Then watch baby laugh and crow.

—*Bulletin Chicago School of Sanitary Instruction.*

ILLINOIS MEDICAL JOURNAL

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State society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

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Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 927 Lawrence Avenue, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

AUGUST, 1920

Editorial

EVERYBODY'S DOING IT. DOING WHAT?
BOOSTING PRICES. EVERYBODY
BUT THE DOCTOR.

This is an era of unprecedented prosperity. The wages of workingmen have gone up one hun-

have been advanced in some instances between dred and fifty per cent. The prices of foodstuffs two and three hundred per cent. The doctor has to pay more rent, three hundred per cent. more for his clothes, shoes, his cook and maid of all work (if he can get them at all), etc. But he still gets only the meager consultation fee he formerly received before the universal boost in prices. If the war has really brought about such an era of prosperity that laborers go to work in automobiles and are able to afford silk shirts, why should not doctors, too, share in the gains? If the people are really prospering they will not object to paying the doctor a larger fee. We suggest therefor that every member of the profession raise his fees a hundred per cent. or more so as to in a measure correspond to the ever-increasing cost of living and the necessity of keeping up his professional and other equipment.

I WENT TO EUROPE A GOOD AMERICAN
AND I CAME BACK A TEN TIMES
BETTER AMERICAN.

Sounds good, doesn't it? It was brought out by Dr. Edward H. Ochsner of Chicago before the Michigan State Medical Society at their annual meeting, May, 1920. Dr. Ochsner in opposing the propaganda for paternalistic government in America, said: "If you get this thing fastened on a country there can be no step backward. There are so many men in the employ of the state and they will keep blowing the horn so hard that you can't say a word about it! Lloyd George went over to Germany (he was so hard pressed that he had to have some scheme) and spent three whole weeks studying Compulsory Health Insurance through an interpreter! He went to the heads of departments and asked 'How is the scheme working?' and, of course, they told him 'It is lovely, it is splendid, it is the utopia on earth. I make forty marks out of it and the doctor down here is getting twelve marks' (this last as an aside).

"I did not do that. I went to Germany and I wore German clothes, and I wore a German moustache (laughter), it was not much of a moustache, but it answered, and I talked the German language. I spent many months there and I lived among the people and never slept a night in a hotel. I spent seven months in Vienna and never

slept in a hotel. I spent several months in other places and spent my time among the people and they did not know I was an American physician. I didn't let the Eagle scream on every occasion. I am proud of that Eagle, he's a grand bird, but there's no use over-doing it! I went to Europe a good American and I came back a ten times better American. I went to Europe with six hundred years of ancestry behind me that hates paternalism, and I'll do everything I can to defeat paternalism in this great country of ours!!"

ANNUAL ASSEMBLY

Tri-State District Medical Society. Waterloo, Iowa, October 4, 5, 6, 7. Program taken up with addresses, essays and diagnostic clinics. Participated in by the physicians of Iowa, Illinois and Wisconsin; also prominent members of the profession from different parts of the country. All physicians who are in good standing in their State Societies are cordially invited to attend and bring their families. A splendid time is assured. The program will appear later in this JOURNAL.

WHAT FOOLS WE MORTALS BE

THE HISTORY OF THE TOWNS' LAMBERT DRUG AND BOOZE CURE

Below we reproduce letters printed in the December, 1917, and January, 1918, issues of the *Medical Economist* showing the discovery (?) of this formula years before Towns' alleged wonderful work. It has taken four years and a legislative investigating committee to discover the unreliability of these advertised so-called "cures."

LETTER NO. 1.

Newark, N. J., Aug. 30, 1914.

My dear Doctor Towns—I am writing to ask you to kindly inform me as to the cost of treatment for a lady in whom I am interested.

She is 42 years of age and has been drinking in spells for some years. Her spells come about every two months and last about a week. Lately they seem to come oftener and last longer. Between the spells she is apparently well, though nervous. She has been treated by several doctors without benefit. They can find no cause for the condition, and some call it periodical dipsomania.

What will the cost be, and what can you do for her? Please consider this confidential and reply in enclosed envelope as soon as possible, as she is now in a spell.

Yours, etc.,

(Signed) ROSE PLATT.

In reply to the above letter the following was received:

New York, Aug. 3, 1914.

Miss Rose Platt, 17 Academy Street, Newark, N. J.

Dear Madam—Replying to your letter of yesterday, would say that nothing short of definite medical help will eliminate the effects of the stimulants which have been taken in excessive quantities, and put the patient where she would feel no craving or the desire for such. There is no doubt but what definite medical help gives a case decided chance to make good. Patients coming to us for this treatment leave here not only free from the effects of the stimulants, but we also give them confidence in themselves in regard to the matter of taking drink.

The active treatment here necessary to complete it does not exceed a week. Few patients remain any longer than that. There are some highly nervous types, extremely neurotic, which we might do something more for. As the active treatment is a limited one, we make a definite charge in advance which covers the entire cost. For private room the charge ranges from \$75.00 to \$150.00. There is a smaller charge where there are two patients in a room, but where it is possible to arrange it we always avoid having patients coming together. For that reason we recommend private rooms. We have a big hospital here and can receive patients at any time.

Yours very truly,

CHARLES B. TOWNS.

It will be noted that Miss Platt addresses Mr. Towns, as My Dear Doctor Towns and that she describes a typical text book case of periodical dipsomania. She quite naturally thinks, as do many others, that Mr. Towns is a doctor. For who would believe that anyone but a licensed doctor can own and operate a hospital in New York City?

It will also be noted that Mr. Towns makes no effort to correct the impression that he is a doctor. It helps his business to be considered a doctor, why should he remove the impression?

Does Mr. Towns say: "Dear Madam: All authorities agree that periodical dipsomania is an incurable disease. All we can do for your patient is to take care of her during the attack. Our treatment will not prevent subsequent attack."? Oh, no! That would be poor business and his, is purely a business proposition.

As Miss Platt indicates that the patient is nervous, Mr. Towns aims to get her for a longer stay. "There are some highly nervous types extremely neurotic, which we might do more for," writes he.

If Mr. Towns conducted a hospital for epileptics and said, "Epileptics coming here to us for this treatment leave here not only free from the effects of their last fit, but we also give them confidence in themselves in regard to the matter of personally preventing subsequent fits," his statement would be just as logical, just as true as the statements in his letter.

For from \$75 to \$150 he offers to do what? I

confess I do not know, and I read his letter several times.—*Ed.*

LETTER NO. 2.

Dear Doctor Towns—I heard from a nurse about your cures. I had much experience as an attendant in such cases and I am now taking care of a young man who has been drinking hard for years. He was in different places for cure, and at Morris Plains his family has been told that he has dementia precox, but I think all that ails him is the drink. I told his mother that you are a doctor specialist in drink cases and she wanted me to find out what you would charge for curing him. His people are well fixed and willing to do anything. I can't afford to lose him, so where do I come in if you get the case?

Yours,

(Signed) M. KENNEDY,
Gen. Del., Atlantic Highlands, N. J.

FIRST ANSWER TO LETTER NO. 2.

Monday Morn, 1914.

M. Kennedy, Esq.

Dear Sir—I came here today to see you in answer to your note, but could not find you. This treatment, which takes about a week, removes all desire for alcohol. It would be better if your patient would stay a week or two longer than a week and I would want you to come and be with your patient. The charge is \$150 for the treatment. I would make a lower price for any stay after that and will take care of your interest in a money way. One of my resident physicians will go down at any time and see you at Atlantic Highlands and make definite arrangements. Please let me know as soon as you can.

Respectfully yours,

(Signed) CHAS. B. TOWNS,
Per Dr. G. C. Darlington.

SECOND ANSWER TO LETTER NO. 2.

Mr. M. Kennedy, General Delivery, Atlantic Highlands, N. J.

Dear Sir—Upon receipt of your letter of September 5, yesterday morning, I sent one of my physicians, Dr. Darlington, to Atlantic Highlands, as he had to make a trip to Philadelphia, and I thought it would only take him a little while longer to take the trip to the Highlands and talk to you personally regarding the case of which you have written me. The doctor writes me this morning from Philadelphia saying he was unable to locate you at Atlantic Highlands, but wrote you and mailed you some printed matter which I trust reached you all right.

Your letter is of much interest to me for the reason that I know from personal experience that there are a great many of these supposedly crazy people with old alcoholic histories that are experiencing nothing more than an after condition due to the deprivation of stimulants which they have been taking, without

giving them some definite medical treatment. I have never yet seen a case of this type but what has cleared up under this treatment. This is a hospital, as you will see, in which the entire work is devoted to dealing with this type of case and we are able to get the very best results. There is nothing in any medication that is going to make a man over, and in the end we can only help those who want to be helped and are worth helping.

The treatment as carried out here eliminates all the poisons from their system and leaves the patient entirely free from any inclination or desire for stimulants and they are in the very best possible condition both physically and mentally to try and benefit himself. The depriving of stimulants in a case like this never removes the cause or desire for it, it makes no difference over how long a period such deprivation is made.

There are very few cases that come to us for help but what make good. There are some that we are unable to permanently benefit, but there is nothing in medicine that will accomplish more than can be accomplished here for such a case.

Should the mother decide to have him come to us for help, I would advise that she have you continue with the case while here and in a case of this type I think a reasonable time of stay would be very much more beneficial than a short period. We froth the park and also have a rustic roof on which the patients can have the best facilities for recuperation.

I appreciate your communicating with us relative to this case and will co-operate with you in any way we can under the circumstances should you be instrumental in having him come to us for help.

Yours very truly,

(Signed) CHAS. B. TOWNS,

Comments upon answers to the second letter would be superfluous. They speak for themselves loudly, proclaiming the character of the Towns' Hospital, which for a fee of \$150 offers to treat for alcoholism a patient whose condition has been diagnosed at Morris Plains as dementia precox.

Will Dr. Lambert declare that periodical dipsomania or dementia precox are alcoholism? Or, will he admit that he was in error when he wrote, "The Towns' Hospital is an institution for the cure and treatment of alcoholism and drug addiction and nothing else."

In commenting upon the indorsement of Towns, I wrote in *American Medicine* (May, 1911), "Suffice to say, the indorsement comes from so reputable a man, that we are compelled to believe that he (Dr. Lambert) has been misled."

I think so, and am sure that I voice the sentiments of Dr. Lambert's many friends when I say that he and his associates are out of place in the Towns' Hospital, and that the announcement of their withdrawal will be welcomed by the medical profession.—*Ed.*

THE LEGISLATIVE INVESTIGATION OF NARCOTICS

In the course of the hearings before the Joint Legislative Committee on Habit-Forming Drugs now sitting in the City Hall, frequent mention was made of private institutions purporting to cure the disease of drug addiction. The Towns' Hospital was one of these and was mentioned only in the severest criticism and condemnation and recommendation was made to the committee to investigate its activities and determine whether that hospital was not practicing medicine in contravention of the law forbidding corporations to practice medicine.

This is a similar recommendation to one handed down by a jury in a trial in the Mineola court in which Charles B. Towns was a defendant and subjected to a fine of several thousand dollars. In this recommendation the jury gave it as their opinion that this hospital was practicing medicine contrary to law. Attention was called before the committee to the connection of Dr. Alexander Lambert with such an institution, and unfavorable criticism directed against such connection. As long ago as August and September, 1914, the *Medical Economist* called attention to the same state of affairs and in December, 1914, published a series of letters, correspondence with Mr. Towns, tending apparently to show that he was holding himself out as treating and curing certain diseases and apparently indicating certain questionable methods of business. We here reproduce these same letters.

Mr. Towns was very active in the agitation for narcotic drug legislation, and thus deserves credit for calling directing the attention of the public to what promised to become a national evil and calamity. Yet that his aims were not wholly altruistic was shown in the course of a conversation after a legislature committee hearing in Albany, with a certain prison physician who spoke of the large number of young individuals who had become afflicted with drug addiction from yielding to temptation through curiosity or the inducements of companionship. In reply, Mr. Towns is stated to have said: "*I don't care about that lower class of addicts; I am after the higher class, the better situated addict who can pay for his treatment.*"—*The Medical Economist*, December, 1917.

METHODS USED BY THE TOWNS' HOSPITAL TO SECURE PATIENTS.

ORIGIN OF THESE LETTERS.

Philadelphia, Dec. 21, 1914.

The Medical Economist, Brooklyn, N. Y.

Gentlemen—I note your references to Mr. Towns in a recent issue of your journal.

This recalls the correspondence I had with Collier's last year after they had published an article in their Weekly on the Towns treatment.

My letter to them was referred to Mr. Towns, and I enclose his reply to me, together with a copy of my letter to Collier's.

In view of the position taken by Mr. Towns, I feel that you will be interested in these letters. If you want to reprint them you have my permission.

(Signed) J. D. ALBRIGHT, M. D.

LETTER OF DR. J. D. ALBRIGHT TO COLLIER'S WEEKLY.

December 8, 1913.

Editor Collier's Weekly, New York City.

Dear Sir—I have read with interest your article "The White Hope of Drug Victims" in the issue of November 29. Without wishing to detract a single iota from the work that you say is being accomplished by Mr. Towns, in his hospital, for the emancipation of drug slaves, I think you will be interested to learn of the existence of this formula and method of treatment prior to the time when it came to the notice of Mr. Towns in a supposedly crude form.

When the Towns-Lambert formula was first published in September, 1909, the ingredients were stated to be

Tr. of Belladonna Leaves	15 per cent...2 oz.
Fl. Ext. Prickly Ash.....	1 oz.
Fl. Ext. Hyoscyamus.....	1 oz.

This prescription, calling for standard pharmaceutical products, evidently represents the original Towns' formula, plus the result of Mr. Towns' research, for you say, "He gave up all other business; he studied the Pharmacopoeia and Materia Medica; he pored night and day for weeks and months over the literature of drug habits and drug treatments; and he began presently to consider modifications and innovations in his treatment, etc." Also, "he was working to relieve the treatment of its drastic features, etc." Also, "Within two or three years the man was successful in eliminating the distressing features of the original treatment. The formula was now perfectly feasible, etc."

About 1898, I received from an old physician in Indiana, whose name I do not recall, a formula for which he claimed specific virtues as a cure for the opium or morphine habit. This formula was as follows:

Tr. of Belladonna Leaves.....	13 drs.
Fl. Ext. Prickly Ash.....	4 drs.
Fl. Ext. Hyoscyamus.....	7 drs.

The direction for its use did not call for ascending doses, as does the Towns-Lambert formula, but the full dose of belladonna—the most active ingredient—was given from the beginning of the treatment. This formula, with a number of others, I published in 1900 in "The General Practitioner as a Specialist," a book intended as a guide to general practitioners of medicine, and it appeared in each of the three following editions of this work, of which about 7,000 copies had been sold to doctors all over the world at the time when the Towns-Lambert treatment was first published—September, 1909.

What to me appears the most peculiar feature of the matter is that Mr. Towns received the formula in some other form, and that when he and Dr. Lambert finally evolved the improved and perfected formula,

they had just what 7,000 owners of my book already had, and which many of them were then using and had been for a number of years. In fact, as I now recall it a physician located in the Thirties near Broadway, first cured himself with this formula as early as 1901, and used it quite successfully thereafter. Yours truly,

(Signed) J. D. ALBRIGHT.

LETTER OF MR. CHAS. B. TOWNS TO DR. ALBRIGHT.

New York City, Dec. 22, 1913.

Dr. J. D. Albright,

3228 No. Broad Street, Philadelphia, Pa.

Dear Doctor—Collier's have referred to me your letter of December 8.

Would say, in view of the frank statements made by me as to how I became associated in this line of work, there is no ground for criticism on your part or any one else. As stated in this article, I never claimed to be the originator of the formula which I have developed. Not being a subscriber to any publication like this one and not having previously been engaged in any line of medical work and never having seen a case of drug habit until this matter was brought to my attention, you can easily understand that I had no knowledge of what you had published nor could have possibly been interested in such under the circumstances, and even had I seen it I would not have been interested in this matter in the slightest.

The occasion of my taking this work up in the first instance was a man by the name of Robert Steele, and I have now in my possession a working agreement which I entered into with him under date of August 20, 1901. He claimed that he had personally been successfully treated by this remedy and knew of two others who had been. The originator of this treatment I knew nothing about in any way whatsoever, nor did I care. I know now, and so do others, that this treatment never would have been properly developed and perfected and put on a legitimate medical basis had it not been for my personal interest and work in the matter, and that is all I have ever claimed for what I have done. The publishing of the formula, as you have in your book, would have been of no more value to the medical practitioner for the successful treatment and cure of the drug habit and inebriety than so much well water would have been, and notwithstanding the fact that you published the formula which contained the three medicines which are employed by me in this treatment nearly fifteen years ago, and ten years before I had given my formula to the world I had never heard of anyone that had ever even claimed to treat by the methods which I have published my formula and stopped at that point, no good in the world would have ever come out of it.

I have never found a physician outside of my immediate work, who was able to deal intelligently with these cases, even after he had in his possession reprints of medical articles which states carefully all the medicine employed here and where every

detail of their method of administration was gone into. As a matter of fact, I find that the medical world, with few exceptions, knows absolutely nothing about dealing with cases of this type, and I consider the most important part of my work now to try and set the medical profession right in trying to meet this vast drug problem in all its phases.

After having perfected this treatment where it has had the recognition of some of the ablest and best informed medical men of this country, I have in no way commercialized this work, nor will I ever do so, but am giving to the profession all of the information and help I can toward providing proper facilities and instructing them in every way that I can in this work, all of which I am doing without making any charge whatsoever.

I have been very frank in dealing with this proposition and claim nothing more than I have accomplished. I am looking for no glory and do not want any. What I have done in connection with this work from the beginning has been clear, open and above-board. I hope I will be able to see this work, wherever taken up, carried out as it is here, on the highest possible medical hospital plane.

I hope that this will set you right as to my position in connection with this treatment and work.

Yours very truly,

(Signed) CHAS. B. TOWNS.

EDITORIAL COMMENT IN THE MEDICAL ECONOMIST.

(REPRINTED FROM THE JANUARY ISSUE, 1914.)

At the beginning of his letter, Mr. Towns seems a little piqued and injured pride glows between the lines. "I never claimed to be the originator of the formula which I have developed," "not having previously engaged in any line of medical work." By implication is he now? Then what was Mr. Towns doing? Was it experimental research on his cases? "This treatment never would have been properly developed and perfected and put on a legitimate medical basis had it not been for my personal interest and work in this matter." Does Mr. Towns still claim after the letters we published in the December, 1914, issue that he is putting it on a legitimate medical basis? (For a fee of \$150 offers to treat for alcoholism a case that has been diagnosed by physicians at Morris Plains as dementia precox, and to take care of the sender in a money way).

"I have never heard of anyone that has ever even claimed to treat by the methods which I have personally evolved." No, neither did we, nor do we want to. The Machiavellian policy and intrigue employed by the Towns' Hospital, and the securing of legitimate and respected practitioners to add an air of respectability, is too much for the average mind to understand. "I have never found a physician outside of my immediate work, who was able to deal intelligently with these cases." By this we are to understand that he is more capable to treat them

than the medical profession. No exceptions. Is Mr. Towns treating the cases?

"I find that the medical world, with few exceptions, knows absolutely nothing about dealing with cases of this type (we thank him for the exceptions), and I consider the most important part of my work now to try to set the medical profession right in trying to meet this vast drug problem in all its phases." (*I am the great I am, I am.*) Hail, all hail! to the new Moses come to deliver the doctors out of the wilderness of ignorance and despair. A thick skin and a cheek of brass are valuable assets, Mr. Towns. "I have in no way commercialized this work, nor will I ever do so." Alas, how often the pedestal topples over and the ideals thereon are shattered. "I hope I will be able to see this work, wherever taken up, carried out as it is here." Heaven forbid!

In conclusion, we feel constrained to say that either the reputable physicians who are associated with Mr. Towns are part and parcel of this gigantic business scheme, or that they are completely hoodwinked by our estimable (?) Mr. Towns. Yet there are none so blind as those who will not see. In the light of the past disclosures, it may not be amiss to suggest that the most honorable thing they could do is to withdraw the use of their names in connection with the Towns Hospital; or, the New York County Society could take action; or, perhaps, under the decision in the case of *People v. Woodbury*, we might eliminate the practice of medicine on the part of this Towns society, corporation or association. We can try to, at least.—(Editor.)—*The Medical Economist*, January, 1918.

WHY THE DOCTOR DIDN'T RETIRE

FABLES FOR THE KANSAS DOCTOR

BY RENNIG ADE

Once upon a time there was a Doctor who had plugged along for a great many years laying up a pittance for old age and guarding his practice with a jealous eye.

At first he had confided to his wife he would be content and ready to retire if he ever could get ten thousand dollars ahead. This was in the pre-war days of ten-cent beef steak with a picce of liver free, and one-ninety-eight shoes.

By dint of economy and self denial he attained his goal, and in a patriotic moment invested it in Government bonds, as being safe and the rate of interest enticing.

This then was the psychological moment to which he had looked forward when he could sit back on his haunches and yawn at the proletariat as it trudged by.

However, before formally relinquishing his practice he decided to sort of check things up. The first rude shock he received was when the assessor came along and assessed his bond, as an old state law permits in Kansas. This is usually avoided by holding up the right hand and swearing that no bonds have been

purchased, "So help me God." The excuse for this law being it prevents people from converting their cash into bonds, and then reselling the bonds after the assessor has come and gone.

No tender-hearted individual should ever take the job of the assessor, as the tales of woe he hears would unnerve the hardiest. In our town there was a Retired Farmer with 800 acres of bottom land who used to speak so feelingly to the assessor of the H. C. L. they would both get to crying and finally end up by the assessor being out a huge chew of tobacco, and the R. F. forgetting to list three-fourths of his personal property.

As the local city tax was three per cent, and the bonds drew three and one-half, the Doctor realized one-half per cent net on his investment which amounted to fifty dollars. This carefully invested would buy two pairs of shoes, four potatoes, and a small slab of bacon.

Plans for retiring were dismissed and the goal reset at five hundred thousand dollars; this sum being considered sufficient to keep a frugal family with only one child to educate.

Later when he decided to sell the bonds and put the money in farm mortgages, he found the former quoted at \$84 and going down, and 2400 more patriots being put on the pay roll at Washington. He couldn't see why stopping the war was so much more expensive than running one, and being no politician never could hope to understand. Clothes kept going up relatively, indecently, and also in price. Some said it was the war, some said the Gulf Stream, while others maintained it was the high cost of wool. Daughter Anna, who was at college and studying economics, had ideas which she thought would materially decrease the H. C. L. She had been rushed by two Sororities on account of the way she wore her hair and danced the "crocodile crawl." She thought it would be a wise plan to keep a sheep and a calf and raise their own wool and calf skins for shoes. When it was explained that calves that are skinned too frequently suffer from cold and fail to make a good growth she abandoned the idea, went to her room and had a good cry.

She had several good cries every day, which with her music and dancing kept her so busy she had no time to help with the cooking and dish washing. However, mother managed to keep things going, and by staying home from church got up excellent Sunday dinners for the pimply-faced mushroom sister would bring home and sing wiggly, squirmy melodies to all afternoon. Dad bolted from the house on the second verse of one of these classics, as he said it reminded him of a place he was in years ago that was raided by the Vice Squad. Every few months Anna gladdened the home by a brief visit, leaving in her wake stockings to be mended and some illy-concealed cork tips.

However, eugenically she was all right, and no fears were felt for her ultimate recovery. True, her mother was not sufficiently risque or modern to get the point of view, but solaced herself with the con-

viction there must be one even if she was too old-fashioned to rise to it.

Seeing the impossibility of reaching the desired goal, Dad wisely decided, now that he was at his best mentally, he would jump into the harness with renewed vigor and make his work his pleasure instead of a daily grind. In order to do this it became necessary to acquaint himself with the latest developments along his lines. By means of post graduate work, diligent study and judiciously selected books he soon became an authority in his section of the country, and was often called in consultation. This pleased him greatly, and incidentally fattened his batting average at the bank. Daughter Anna was able to finish her school work, and vamped successfully for two seasons afterwards, marrying a shoe salesman in one of the local stores, and doing light housekeeping in a cottage next to her mother's. In due time she became president of the Mothers Club, and had her baby's picture in the Ladies Home Journal underneath the signed caption "Parental Precociousness Provocative of Post-Natal Perspicacity." This was read before the Portia Club, and copied by the home paper with comments by the society editress, who also made all the trains.

All of which goes to prove Anna was bound to get her stride sooner or later.

The Doctor took great pleasure in his grand-children and in his professional work, and forgot that anybody ever retired.

Moral—The live ones don't.

J. K. S. M. S.

ANIMAL EXPERIMENTATION SAVES HUMAN LIVES AND PREVENTS DISEASE.

The Panama Canal would not have been built by this time if animal experimentation had not revealed the specific nature of yellow fever. If it had finally been constructed with no better knowledge of yellow fever than when the French abandoned the project after a cost of 20,000 lives, it would have deserved such a name as "The water lane of the yellow death."

Prevented a More Costly War.—Animal experimentation has provided vaccins, bacterins, and anti-toxic serums; it has aided in the development of new methods of surgery and of reliable means of diagnosing infectious diseases; it taught us how to use gases during the war and how to defend our soldiery against them. In the absence of such knowledge the recent war would have cost additional thousands of lives and would have produced many additional thousands of cripples.

If animal experimentation had not taught us how to cure many diseases of the lower animals and how to suppress appallingly destructive live-stock plagues, the hunger and starvation prevalent in some parts of the world would be practically universal. Experiments with animals have provided means for controlling human diseases like smallpox, Asiatic cholera,

bubonic plague, malaria, typhus fever, etc., in addition to yellow fever already mentioned.

Live-Stock Plagues Controlled.—Animal experimentation has enabled the United States to exclude from the country, or to control, food-destroying diseases like rinderpest, foot-and-mouth disease, anthrax. Texas fever, hog cholera, surra, swine erysipelas, contagious pleuropneumonia of cattle, sheep scab, and the like.

Without abundant live stock—the result of animal-disease control—it is questionable whether food enough for the present population of the world could be produced. Live stock convert enormous quantities of grass, hay, and coarse vegetable matter, unfit for human stomachs, into easily digested, nutritious food.

Because of the similarity between the human body and the higher animals, discoveries useful to stockmen and veterinarians are of service also to hygienists and physicians. Animal experimentation has resulted in the following basic knowledge: Circulation of the blood; capillary circulation; the vasomotor mechanism; functions of the nervous system; the flow of chyle in the lacteals; the passage of chyle through the lymph ducts into the venous circulation; the nature of the digestive fluids and chemical transformation of food through their action; functions of the liver, lungs, kidneys, and other organs; the reaction of the cells to various kinds of stimuli; significance of the endocrine glands; nature of inflammation and other pathological processes; and numerous other discoveries in physiology, pathology, and biochemistry.

Action of Drugs.—Experiments with live stock have contributed richly to the current knowledge of drugs and their uses and to the precise information we have of the therapeutic, physiologic, and toxic actions of the innumerable substances from which our useful drugs have been selected.

Without specific knowledge of how drugs act on the body as a whole, or on special parts of the body, and whether their action is immediate or cumulative, the death rate among persons and animals would be multiplied, and the greater losses among the latter would be a serious economic disadvantage.

Nature of Tuberculosis.—Animal experimentation has proved that the manifestations of tuberculosis in different portions of the body and in the bodies of different species of animals all have one essential cause; it proved that the disease is contagious; it led to the discovery of the tubercle bacillus; it proved that the bacillus is quickly destroyed by light, but may long remain alive and virulent in dark places; it proved that there are three types of tubercle bacilli, the human, the bovine, and the avian; it proved that the avian type is not an important cause of disease among mammals; it proved that the human type is the commoner cause of tuberculosis among human beings; it led to the discovery of tuberculin, without which, used as a diagnostic agent, the control and eradication of tuberculosis among food-producing animals would be impossible.

Experiments with animals have given information

that prevents untold suffering of both persons and animals by aiding in the preservation of health and hastening recovery from sickness. Persons who treat diseases among animals probably relieve more pain every day than animal experimentation causes in a score of years; and they do this through the agency of knowledge that the experiments supplied.

The foregoing summary of results is believed to be of general interest especially as it relates to the frequent assertion that live stock receives more scientific study than human beings. The fact remains, however, that greater knowledge and skill applied to live stock raising is a definite means of benefiting mankind. For instance the development of an ample and safe milk supply is obviously a practical way to reduce mortality among and to correct undernourishment of babies. Similarly the eradication of parasites in sheep is an essential step toward an adequate supply of wool clothing is shown by studies of the Bureau of Animal Industry of the United States Department of Agriculture.

THEY ARE WILLING TO THROW ANY SOP TO CERBERUS, EVEN IF IT BE THE ANCIENT AND HONORABLE MEDICAL PROFESSION

Dr. George E. Frothingham, of Detroit, in the *Wayne County Weekly Bulletin*, April 26, 1920, in speaking of Health Insurance, says: "Who does want it? All I can find is a group of professors on economics—professional uplifters, parlor Bolsheviks, and a sprinkling of honest men and women of great wealth, who think to stem red revolution by their puny efforts in salving the wounds of the submerged with 'compulsory health insurance.'" The great fear lies, not with those who oppose "compulsory health insurance," but the great fear is in the souls of those who sit in the seats of the financially mighty. They fear that what they have will be taken from them, and they are willing to throw any sop to Cerberus, even if it is the great ancient and honorable medical profession. As the Albany Senator sarcastically remarked, "Physicians know much, but they have yet to learn the first laws of self-preservation." "Go home and organize," said he to the lone doctor come to oppose compulsory health insurance, "and then come back to Albany." The profession did organize in New York State, and for four years they have kept the enemy at bay.

You have been told that this is a question of economics, not a question of medicine; that the physician has the right to consider that part

which pertains to his calling. For far too many years physicians have been neither fish, flesh, nor good red herring. The minute a man tacked M.D. to his name, he automatically ceased to be a citizen and a taxpayer, a man of the State, as well as in the State. It is time we woke up and, if compulsory health insurance is the awakening gun, all the work done will not have been in vain.

I NOTICE THE DOCTORS HAVE BEEN BEATING THE ASSEMBLYMEN WHO VOTED FOR THIS BILL LAST YEAR

Judge Ommen, of New York, before the Society of Medical Jurisprudence, New York, January 12, 1920, in discussing some legal aspects in health insurance, said:

Compulsory health insurance is something the propagandists want, but the working people do not want it at all. I am counsel for a large manufacturing corporation and the men at the shops had never heard of health insurance. When it was explained to them, and they were told they would have to pay a part of their wages, they rebelled, held a meeting and passed resolutions that if any money was to be taken out of their pay they would take it out themselves. There are 76 Assemblymen and 26 Senators, altogether 102 men, and these are the people you must reach and influence. Governor Smith is going to sign this bill, because he is the friend and exponent of the measure, and it means his prosperity. A lot of Assemblymen who voted for the bill last year are not going back this winter. I notice the doctors have been beating the Assemblymen who voted for this bill last year.

IF A DOCTOR SAYS HIS PATIENT IS SICK AND UNABLE TO WORK, AND THE OFFICER OVER HIM SAYS THE PATIENT IS NOT SICK AND SHALL GO TO WORK, THE MAN HAS TO GO TO WORK

Dr. L. W. Zwisohn, in discussing legal aspects of health insurance before the Society of Medical Jurisprudence, January 12, 1920, said:

The advocates of compulsory health insurance say that statistics show that a certain number of the people do not have medical attendance and that health insurance will compel them to call a panel physician. It is certainly not American where one can compel a person to be treated against his will. But it is not a question of dollars and cents with the medical pro-

fession; it is the principle that is involved. The question is, shall the medical men relieve pain and suffering as they have always done in the past, or shall the profession become commercialized and become the plaything of politics? When a man becomes a contract physician it degrades him, for they put over him a medical officer who says when his patient is sick and when he is well. If a doctor says his patient is sick and unable to work and the officer who is over him says the patient is not sick and shall go to work the man has to go to work. This is not a reform; it is degrading. This is a step toward Bolshevism. The medical profession is defenseless because the legislators say they are working only for their own pecuniary benefit.

THE MEDICAL PROFESSION IN ENGLAND IS ENTIRELY DESTROYED AND DISINTEGRATED

Dr. Eden V. Delphey, New York, before the Society of Medical Jurisprudence, New York, January 12, 1920, said:

The freedom that was delivered into our hands by the Pilgrim Fathers recognizes but one kind of socialism and that is the socialism that makes a man work for the benefit of mankind and do the best he can do. That kind is not to be condemned, but that is not the kind of socialism that is being fostered. They are trying to put over on us a variety of Bolshevism, which is in reality the law of the jungle and of the Hun. Its principle is to get all you can, to keep all you get, and to make the other fellow work for you. You need only to look at Germany and Russia to see what that brand of socialism does for a man. Dr. Hoffman tells me the medical profession in England is entirely destroyed and disintegrated. I cannot think that the medical profession in this country would ever strike, but they have struck in Germany and are on the verge of striking in England. We are not opposed to compulsory health insurance simply because of its pecuniary effect on the medical profession. In a discussion of the economic side of the question a short time ago, Mr. John Lapp tried to show that under compulsory health insurance each physician would get an annual income of \$5,400, but he did not tell how this was to be done when a physician would get 25 cents for an office call and for a house call not quite a dollar; and then he thinks the physicians ought to like it—but we don't and we won't.

THE DOCTOR A MEDICAL TAXI ALWAYS ON CALL

The following was brought out at the discussion of some legal aspects of health insurance before the Society of Medical Jurisprudence, New York, January 12, 1920:

Under these provisions of the bill the physician loses his individuality, his independence and his incentive to make scientific progress. He is practically a salaried employee of the fund, subject to the direction and criticism of the regular medical officer of the fund. His fees are fixed without his consent, and he has no appeal beyond the industrial commission. He becomes a contract doctor, a cog in a political machine, geared to a definite, measured operation, a routinist, an empiricist, a dispenser of such drugs, supplies and appliances as may be approved by the fund, a medical taxi always on call.

INEFFICIENT MEDICAL SERVICE IN PLACE OF PRESENT SCIENTIFIC TREATMENT

The present trend of the times is the attempt to put the Doctor out of business, and substitute for the present scientific care of the people cheap, inefficient medical service in the form of State Medicine.

Another great danger that is upon us is the disposition on the part of the authorities at Washington to try and set up a bureaucratic form of government in America and attempt to extend wartime powers to peace conditions. We feel that state rights must be preserved, otherwise all initiative as well as the individual will be destroyed. This vicious trend of the times has got to be corrected at once, otherwise we will soon be the most governed people on earth. It is an old and true saying that "that country is governed best, that is governed least."

"CHRISTIAN SCIENCE" AND SLOPPY THINKING

A New Jersey salesman, who claims to have been a member of the "Christian Science" faith for three years, was recently found guilty of manslaughter because he had permitted his 9-year-old daughter, who was suffering from diphtheria, to die without medical treatment. The little girl was given "treatment"—"absent" and otherwise—by a professional "Christian Science" practitioner. The man was fined \$1,000 and costs. The judge, in imposing sentence, is reported to have said:

"In the light of present-day science, which is the result of many years of progressive experiment and demonstration, no one is justified in neglecting the use of such agencies as have been shown to be efficient in the treatment of malignant and contagious diseases, and this is especially true where one is charged with responsibility over the life of another, and particularly of a child of tender years, who has no option

but to rely on the common sense and good judgment of its natural protector."

The verdict has brought to light, as such verdicts are likely to do, the loose thinking that characterizes so many of the so-called intellectuals of today. Well-meaning people, who deny that they are followers of Mrs. Eddy, have written to the newspapers denouncing the verdict and declaring that it is little less than a crime that a man should be punished for following the dictates of his conscience. The main point stressed by such people seems to be that as children occasionally die of diphtheria under medical treatment, there is no reason for getting excited when a child dies under "Christian Science" treatment. The argument, of course, is fallacious. The efficacy of the modern scientific medical treatment of diphtheria is not a matter of theory, belief or conscience—it is a matter of fact. Its efficacy is as demonstrable as is the efficacy of the Westinghouse air brake. The parent or guardian who fails to give his child or ward the benefit of modern medical treatment for diphtheria becomes as culpable as a railroad would be if it failed to equip its passenger trains with air brakes. Sometimes, it is true, the air brake fails to avert a fatality; but that is not the fault of the air brake, nor is it any argument for its abolition.

If an adult in his own right mind wishes to be treated by "Christian Science" or any other unscientific methods, there can be no objection, provided the disease from which he is suffering may not, through such treatment, become a menace to the community. Children of tender years, however, should not be sacrificed to the distorted views of those who are supposed to be their protectors.

Religious beliefs should be respected and, in general, they are respected. Where, however, religious beliefs conflict with the general welfare, such beliefs must give way. Presumably, the Mormons were sincere in their belief in polygamy; that particular tenet of their religion, however, had to give way to the more enlightened belief of the rest of the community. The Dukhobors that migrated to Canada were undoubtedly sincere in their belief that they should go nude, and the practice of this belief was undoubtedly less of a menace to the community than are some of the bizarre views held by "Christian Scientists" regarding the cause and treatment of disease. Nevertheless, the Dukhobors had to put on clothes. It is conceivable that we might have transplanted to this country some of the religious beliefs of India, but it is doubtful whether public opinion in the United States would ever look with equanimity on Sutteeism, even though the widows might declare that being burned on the funeral pyres of their diseased husbands was a matter of their own personal belief and was none of the concern of the general public. Only a few weeks ago a man in Chicago shot his son with the avowed intention of killing the boy because he feared the lad was acquiring bad habits and he wished to save the boy's soul. We have not yet noticed any letters of indignation protesting against the man's

arrest. Possibly this is because he represents a minority. Should such beliefs ever reach the dignity of a religious cult with money and well-organized publicity machinery behind it, there would doubtless be found many to defend the killing of minors for the purpose of saving them.—*Jour. A. M. A.*, May 22, 1920.

EDDYITES WANT SICK BENEFITS

One's religious tolerance must be fixed in a peculiarly solemn setting if it resists a chuckle over the embarrassment that has befallen the Christian Scientists belonging to the teaching force of the New York City public school system. The regulations of the city board of education provide that a teacher absent from duty will not be "docked" of pay if she turns in a certificate from her physician that she was too ill to work. Now, strangely enough, the Christian Scientists on the staff want the benefit of that rule; although "Science and Health" teaches them to deny that there is any such thing as sickness in the world, yet it is far more agreeable, when pay day looms ahead, to deny the denial than to contemplate the loss of needed cash.

But the grave difficulty comes over that required certificate of a physician; the only physician known to loyal disciples of Mother Eddy is the Christian Science healer. Will, then, the board take a healer's certificate that on such and such a day an absent teacher was ill? No, says the board, it will not. If the healer is consistent, all he can certify to is that the teacher had an error of mortal mind. And the board of education of the august City of New York says that if it knows itself—and it thinks it does—there is no good New York money going to be paid out to encourage errors of mortal mind. Let the Christian Scientist engage "absent treatment" and stay in her schoolroom. The strange doctrine of Mrs. Eddy has led her followers into a good many ridiculous and abashing situations, but none more ludicrous, we judge, than this spectacle of so intelligent a company of the faithful industriously whipping the devil around the proverbial stump in order to obtain sick benefits for maladies and infirmities which they constantly declare not to exist.—*From The Continent*, Chicago, editorial.

SUGGESTIONS FOR THOSE WHO EMPLOY PHYSICIANS

The suggestions for those who employ physicians, which we copy in the following, we found on the back of a physician's statement. The irony that dictated these "hints" is sufficiently sharp that it might accomplish some good if the text were brought to the attention of certain laymen who are guilty of various sins of omission and commission against their physicians.

"When you send for a physician, be very careful not to give him any idea as to the nature of the case

he is called to see. He might want to bring appropriate medicines or instruments.

"If possible, always send for a doctor in the middle of the night. It gives him a better chance to keep the family awake giving medicine. In selecting your physician, always consult some old female busybody with a ball-bearing tongue. They are usually on hand and ready to accommodate you when you have a long case of sickness.

"Change doctors once or twice just for luck. You do not have to pay those whom you discharge. If a doctor loses a case, advise everybody not to employ him. Doctors should cure their cases, not lose them.

"If the old physician gets cranky and will not answer your call just because you will not pay him when you can, drop him and get the new doctor who does not know you so well.

"If you see a doctor coming along the road in an auto, bother him a little by holding the road. He don't need to be in a hurry. The patient will probably die, anyway; when you wish to cheat a doctor out of his pay and at the same time be able to look your neighbors in the face like an honest man, find a whole lot of fault with him. This places all the blame on him. Let your doctor bill run as long as possible. Doctors do not pay their bills and do not need money.
—*Clinical Medicine.*

"OUIJA SAYS"

The ouija board craze has grown to alarming proportions recently throughout the entire country.

Why? What does it mean?

Humanity is emotional and subject to fads—when "Simon says thumbs up" Simon gets the laugh if "Simon wig wags." Fear of being laughed at makes us slaves to the customs about us. But why this fad of the ouija board?

It seemingly was started as a means of providing an evening's entertainment, perhaps because with the advent of prohibition the evening otherwise would have been a dull one.

Press dispatches have reported a number of persons who have become demented because of their absorption in following the mysteries of this board.

Doubtless the country contains a far greater number of ouija addicts than we realize. Are we suppressing (trying to) alcoholic and narcotic addiction and allowing a potentially powerful and very subtle ouija addiction to supplant them?

We hope the Harrison law and prohibition will in some way lessen degeneracy, but if ouija addiction drives men and women crazy, are its "spirits" better than the "spirits" of liquor.

Will our children's children be proud of a lineage that worshipped the ouija fetish? If the enlightened present-day civilization fails to condone "Salem witchcraft" will the sons and daughters that follow condone the ouija?

BRAINS VS. PARROTS

Just a little while ago our medical schools, not one but most of them, taught that they way to take out a small child's tonsils was to wrap its arms about with a sheet, pinion its legs between strong knees and with head held firmly against an attendant's breast "take them out." Some one has said that was the way to do it and every Simon's thumb had to go up or he was an object of ridicule because he was not "up-to-date." Today some men denounce that as a cruel method and say there is a better way.

Just now there is a small rift in the clouds through which appears a faint light in current medical literature indicating that a doctor need not be crucified for failing to do an appendectomy when his inner conscience told him that "Johnny" had a real old fashioned "tummy ache."

The point is that sane and mature doctors with minds developed by years of training and experience are carried wily-nily, hither and yon, by some fad or fetish doing the things that others do without stopping to study or reason the individual case on its own merits.

The medical profession needs brains—not parrots or monkeys.

DO PATIENTS HAVE INTELLECT—A WILL—A SOUL?

Frequently a detail man—a salesman—enters my office with a line of chatter which he had determined to rattle off without being interrupted. I tried to stop one of them once to ask a question and he barely halted long enough to give me a very unsatisfactory answer almost in monosyllables, then continued his oration. These men make one feel that they don't know human nature. They act as if the matter of supreme importance is to get off their rigmarole from start to finish just as they memorized it from some ambitious sales manager. My whims and individual peculiarities were matters unworthy of consideration, and also whether I was listening to the harangue or not was of minor importance.

They created the impression that they were parrots sticking up their thumbs because "Simon (the sales manager) says thumbs up," or perhaps they considered me as without brains or reason and had only to be talked to as if I were being made into a phonograph record.

There are many doctors, failures, because they never quite get the idea that patients have an intellect, a will, and a soul.

More and more is the human economy becoming considered nothing more or less than an animated chemical laboratory and the soul of the patient has become almost a forgotten factor. The patient's individual peculiarities figure but little, and the mind within him which is of so vital importance in controlling his physical, physiological and chemical reactions is ignored.

The profession needs all the laboratory help that can be perfected but our patients need doctors who can read these findings in their proper relation to an

animated human being, no two of whom are just alike.

"CAN ANY GOOD THING COME OUT OF NAZARETH?"

Just recently the word comes from Ireland that, for the first time in history, there appears in the King's list of civil honors, a riveter, having been made a member of the order of the British Empire, for establishing the world's record in driving rivets.

Isn't our altruistic, democratic Medical Profession too much given to making a fuss over the "grand stand players" and forgetting the man who although outside the bright rays of the spotlight, is nevertheless getting results and giving his life in an earnest, honest effort to get sick people well.

Once in a while a man looms up from the plantation and becomes a Marion Sims, but thousands of others from personal choice, remain on the plantation doing some special work in their own individual and original way, getting results that the Charlie Chaplins of the profession could hardly match.

The fountain of knowledge is within and about us and the man deserving to be heard is the earnest, conscientious hard worker—the riveter—whether his office be on the plantation or along the great white way.

A WELL BRIDLED TONGUE

Shallow minds are inclined to let words drip from their tongues like a never ceasing pitter patter of rain-water—"Empty vessels make the most noise."

Very few doctors are ever "dismissed" for being too quiet, but some lose the case because of their undue weakness for gabbling.

A man who is good at making excuses is seldom worth much for anything else.

A great many young doctors, both well educated and poorly educated, lose their chance of success by being too voluble.

The Japanese have a proverb which says:

"A look is better than a thousand words."

"My doctor is simply wonderful. His cheerful smile and hopeful expression are worth a million drug stores."

"The grouch throws sand into the machinery."

"The day's mile can be shortened by prefixing an 's' to it."—*Charlotte Medical Journal*, July, 1920.

Correspondence

HEALTH INSURANCE HAS CEASED TO BE A HUMANITARIAN QUESTION

The following from Dr. J. Holinger, one of our eminent Chicago physicians, is of great interest to the medical profession:

To the Editor: Enclosed find a clipping from a Swiss newspaper which it seems to me is of importance in formulating the minds of American

physicians as to compulsory health insurance. It says the physicians of the grand duchy of Baden went on strike for higher fees from the public sick benefit organizations and for the right of each patient to select his own physician. The doctors do not refuse to treat the patients, but the patients or their relatives have to guarantee the payment of the honorarium. The sick benefit organizations refuse to request of the doctors, especially are they opposed to the patients selecting their own doctor, while they are willing to consider an increase of the fees. The physicians, however, insist that the free selection of physicians is much more important to them, knowing very well that without it the organizations will simply play one physician against another, and in this way cut down any temporary increase in fees. The most interesting to us is the last sentence: "The Socialist press of the working people is much opposed to the strike of the physicians, and does not want to admit the requests of the doctors. It even denies them the right to strike." It is evident that health insurance has ceased to be a humanitarian question. The honest work of the physician, the welfare of their families, the progress of science which they stand for has become nothing but political capital which the bosses offer to their constituents if the physicians would agree to public health insurance.

The following is the translation from the *Basellandschaftliche Zeitung*, dated July 8, 1920:

Since last Monday, the physicians of the entire state of Baden have refused to work for the sick panels. They do not refuse to serve the patients, but will do so only on the conditions that the fee be guaranteed by the patient or by a relative. The physicians are demanding considerable increase in fees and especially a demand that the panel doctor system at present in vogue be done away with. They are introducing a measure whereby those enjoying the privilege of the insurance act would have the free choice of the physician. The authorities in charge of the panels absolutely refuse the request of the physicians, especially the free choice of physicians, but are willing to arbitrate in regard to an increase in fees. The medical organization, however, consider the free choice of physician as their main and fundamental request, thus bringing about a failure for all attempts of mediation by the government. The Socialist press, or the so-called newspapers of the working people, evidently do not want to recognize the right to strike by medical men, in their demand of the free choice of physicians.

This is an interesting communication, since it shows that as long as the more intelligent indi-

viduals in the nation are suppressed either by a dollar oligarchy or by radical socialists, bolshevists, etc., conditions will arise where all human progress ceases, and the intellectual development of the human race is inhibited, by the low browed, sordid animal desires and motives, which we have lately so much observed in the so-called civilized nations.

Public Health

PUBLIC HEALTH SERVICE SCHOOL OF TUBERCULOSIS.

The U. S. Public Health Service has established at Springfield, for its acting assistant surgeons and local medical examiners employed in the care of sick and wounded returned soldiers, a school for the diagnosis of pulmonary tuberculosis. Instruction is given at the dispensary of the Springfield Tuberculosis Association, at the Diagnostic Laboratories of the State Department of Public Health, and at the Palmer Tuberculosis Sanatoria. Each class consists of ten physicians and the course lasts for a period of seven days, or twenty-one sessions. The school is a permanent institution. Courses will be given on alternating weeks. The first course began Sunday, July 18th, and additional courses will begin August 1st, 15th, and 29th.

This school of instruction is rendered necessary by the difficulties encountered in the diagnosis of early tuberculosis among returned soldiers, sailors, marines, and nurses, and particularly in the differentiation of tuberculosis in the large numbers of service men who suffered from gas poisoning during the war. The total number of returned tuberculous soldiers in Illinois at the present time is said to approximate twenty-five hundred.

HEALTH ACTIVITIES AT THE ILLINOIS STATE FAIR.

The public health activities of the State Department of Public Health at the Illinois State Fair at Springfield, which have grown remarkably in the past few years, will be developed to a greater extent than ever at the Fair, beginning in August. The exhibits, better babies conference, motion picture shows and other features will occupy a large part of the second floor of the Exposition Building. In addition to the mechanical models and other display features which have always attracted tremendous crowds, there will this year be a number of models exhibited for the first time and illustrating and accenting the more recent important features of preventive medicine.

At the State Fair last year the Better Babies Conference received about six hundred infants for examination. From applications already received, it is believed that the entries this year will exceed all past years.

The State Department of Public Health has endeavored in every way to avoid those features common to so-called "baby shows." Infants are examined by a large staff of competent physicians under conditions which guarantee the maximum of quiet and healthful surroundings. In those parts of the physical examination which are open to public inspection glass partitions are arranged between the examiners and the audience.

The two features which have been most definitely developed within the past two years have been the comparative tests and examinations of babies examined at previous conferences, and the medical advisory or councilor service through which parents of children may secure advice on all phases of child hygiene and preventive medicine.

Applications for admission of infants to the Better Babies Conference must be received by the Director of Public Health at Springfield, not later than August 12th.

STANDARDIZING TUBERCULOSIS SANATORIA IN ILLINOIS.

The State Department of Public Health has just completed the inspection and score card rating of all public tuberculosis sanatoria in Illinois outside of Cook County. In these ratings the Department used the standards adopted by the National Sanatorium Association and approved by the National Tuberculosis Association, in which stress is laid upon the medical nursing personnel and the character of service rendered rather than upon buildings or equipment.

The results of the first ratings have been placed in the hands of sanitarium trustees and institutional officials for their guidance and a supplementary investigation will be made in the autumn to determine to what extent the recommendations of the Department have been observed and carried out in the several institutions. The detailed ratings from the first inspections are not given to the public, but it is stated that of the nine institutions already examined, only one attained a grade of over 90 per cent., entitling it to classification as a Grade A sanatorium.

The inspection of the public sanatoria in Cook County will be completed in the near future and it is expected that the autumn inspection will include the private sanatoria in the state.

RULES FOR THE CONTROL OF TRACHOMA.

The State Department of Public Health has completed the preparation of rules and regulations for the control of trachoma. It has been recognized for many years that trachoma is prevalent to a surprising extent in a number of sections of Illinois and this belief is now being confirmed in the trachoma clinics held at Mount Vernon, Harrisburg, Saline County and Benton, Franklin County.

CLINICS FOR CRIPPLED CHILDREN.

For the first time the Division of Child Hygiene and Public Health Nursing of the State Department of Public Health is conducting its clinics for crippled children throughout the summer. In all of the twenty-three clinics the summer attendance is satisfactory and in many rural communities more patients are presenting themselves than during the other months of the year. This is due to the fact that the public health nurses are enabled to get into the country and to locate victims of infantile paralysis and other orthopaedic defects that have not had proper care in the past. The children now under care in the crippled children's clinics come from 352 Illinois cities and communities.

In every community in which clinics for crippled children have been established, there has first been assured the thorough co-operation of the local medical profession through the county medical society.

CONFERENCE ON BUBONIC PLAGUE.

The Director of the State Department of Public Health has been advised by the Surgeon General of the United States Public Health Service of a conference of State health authorities on bubonic plague and rat extermination to be held at Galveston, Texas, on August 2 and 3.

This conference is held to permit a discussion of the means which the various states will take to prevent the invasion of bubonic plague which has appeared at a number of sea-coast cities and which now constitutes a very real menace, and also to permit the State health officers to observe at first hand the preventive measures now being carried out at Galveston and other port cities, including the wholesale destruction of rats.

Book Notices

PATHOGENIC MICROORGANISMS, a practical manual for students, physicians and health officers. By William Hallock Park and Anna Wessells Williams, assisted by Charles Krumwiede, Jr. Seventh edition, enlarged and thoroughly revised with 214 engravings and 9 full page plates. Philadelphia and New York: Lea & Febiger, 1920. Price \$6.00.

This is a very exhaustive work of 786 pages divided into LIII chapters. It treats of the characteristic methods of examinations and cultivation of microorganism, the relation of microorganisms to disease. Toxine and anti-toxine, the various microorganisms causing disease; the use of vaccines, standardization of disinfectants. Disinfectants and methods of disinfection. It also contains a complete index. The work should be in the library of every student and practitioner.

A TEXT-BOOK OF DERMATOLOGY, by J. Darier, M.D., edited with notes by S. Pollitzer. Illustrated with

204 engravings and 4 colored plates. Philadelphia and New York: Lea & Febiger, 1920. Price \$3.50.

This is an authorized translation from the second French edition. The work is entirely abreast of the progress of science and is as complete as possible without unnecessary details. Many paragraphs have been rewritten and considerably elaborated. Among these may be mentioned anaphylaxis, phagedena, the sarcoïds, the gangrenes, the cutaneous atrophies, etc. The work is founded on a vast personal experience and is well worth the money.

A NURSE'S HAND-BOOK OF OBSTETRICS By Joseph Brown Cooke, M.D. Ninth edition. Revised and enlarged. By Carolyn E. Gray, R. N., and Phillip F. Williams, M.D. 189 illustrations and 4 full pages in color. Philadelphia and London: J. B. Lippincott Company, 1920. Price \$3.00 net.

The fact that this work has gone through nine editions speaks volumes in its favor. Many changes and additions have been made in the subject matter. The work has been brought strictly up to date and is presented in a concise and comprehensive manner. The work should prove of great assistance to physicians, students and graduate nurses.

A MANUAL OF PHYSICAL DIAGNOSIS. By Austin Flint, M.D. Eighth edition, revised by Henry C. Thacher, M.D. Illustrated. Philadelphia and New York: Lea & Febiger, 1920. Price \$3.00.

The fact that this work has gone through eight editions shows an increasing demand for a work of this kind. This work is intended to fill the demand of the student and of graduates in medicine. The book is conspicuous for simplicity, directness, exactness and skill in dealing with physical signs in health and disease. It fills a great void in the subject of diagnosis.

SYMPTOMS IN THE DIAGNOSIS OF DISEASE, by Hobert Amory Hare, M.D. Eighth edition. Thoroughly revised. Illustrated with 195 engravings and 9 plates. Philadelphia and New York: Lea & Febiger, 1920. Price \$6.00.

The fact that the work has gone through eight editions should be a sufficient recommendation. As laboratory diagnosis is now so highly developed that it requires special books for its adequate description, the author has omitted laboratory methods from his text, desiring to lay special emphasis on symptomatology. This book is written upon the plan which is actually followed in practice, namely, the upbuilding of a diagnosis by grouping the symptoms. This work should prove a valuable addition to the physician's library.

A DIABETIC MANUAL, for the mutual use of doctors and patients. By Elliott P. Joslin, M.D. Illustrated. Second edition, thoroughly revised. Philadelphia and New York: Lea & Febiger, 1919. Price \$1.75.

This book meets a long felt want, the treatment of diabetes is improving every day and this work is in oughly revised, condensed and simplified, with the renewed purpose to make it serve as a text-book for the physician to use in the education of his patients. The work should prove of great assistance to both the general practitioner and the specialist.

THE HISTORICAL SOURCES OF DEFOE'S JOURNAL OF THE PLAGUE YEAR. By Watson Nicholson, Ph.D. Illustrated. Boston, Massachusetts: The Stratford Company, 1919. Price \$2.00.

This work should prove of great assistance to students of medical history.

ARTERIO-SCLEROSIS AND HYPERTENSION, with chapters on blood pressure by Louis M. Warfield, M.D. Third edition. St. Louis: C. V. Mosby Company, 1920. Price \$4.00.

The third edition of this work is very timely so much that has previously been written on this subject is of no value at the present time. The literature has been well selected and, therefore, the work is as up to date as is possible for any work to be on a subject that is undergoing such rapid investigation as Arterio-Sclerosis and Hypertension. The book is well worth the price asked for it.

THE SURGICAL CLINICS OF CHICAGO. Volume IV. Number III (June, 1920). Octavo of 204 pages, 79 illustrations. Philadelphia and London; W. B. Saunders Company, 1920. Published Bi-Monthly; Price per year: Paper, \$12.00; Cloth, \$16.00 net.

This volume represents the surgical work of a number of Chicago doctors. There are clinics by Doctors Allan B. Kanel, Herman L. Kretschmer, David G. Straus, A. D. Bevan, Alfred A. Strauss, E. L. Cornell, D. N. Eisendrath, Geo. E. Shambaugh, R. L. Moodie, G. L. McWhorter, E. L. Moorehead, F. H. Falls.

HUMAN PARASITOLOGY, with notes on Bacteriology, Mycology, Laboratory Diagnosis, Hematology and Serology, by Damaso Rivas, M. D., Ph. D., Assistant Professor of Parasitology and Assistant Director of the Course in Tropical Medicine, University of Pennsylvania, Octavo Volume of 715 pages with 422 illustrations and 18 plates most of which are in colors. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$8.00 net.

This is a very timely work, because of the ever changing nomenclature of parasitology and the great difficulty in keeping abreast of the times through attempting to read and classify all the present medical literature. In this work the subject is brought up to date in a very concise and very easily assimilated form.

THE NEWER METHODS OF BLOOD & URINE CHEMISTRY. By R. B. H. Gradwohl, M. D., and A. J. Blaivas. Second edition with 75 illustrations and 4 colored

plates. St. Louis: C. V. Mosby Company, 1920. Price \$5.00.

The great interest in blood chemistry at the present time makes this work doubly welcome. A number of new facts in technic and interpretation have been developed since the time of appearance of the first edition of this work. These facts have been incorporated in the second volume. This work should prove very valuable to students of blood chemistry and laboratory workers and general practitioners. It is a very timely work and well worth the money.

DISEASES OF THE INTESTINES AND LOWER ALIMENTARY TRACT. By Anthony Bassler, M. D. Illustrated with 154 text engravings and 62 full page half tone plates (with over 70 figures), some in colors. Philadelphia: F. A. Davis Company, 1920. Price \$7.00 net.

There is a great demand at the present time for an up-to-date work on Diseases of the Intestines and Lower Alimentary Tract. This book meets the requirement in every particular. This work is not a compilation; while it brings the subject to date, nevertheless it gives the authors personal equation and his experience on the subject. The work should be in the library of every practitioner.

RADIOGRAPHY IN THE EXAMINATION OF THE LIVER, GALL, BLADDER AND BILE DUCTS. By Robert Knox, M. D., 64 illustrations: St. Louis. C. V. Mosby Company. 1920. Price \$2.50.

A correct diagnosis in diseases of the Liver, Gall Bladder, etc., is essential. To differentiate between diseased conditions of these organs is frequently very difficult. There are so many structures situated in this region which may give rise to perplexing symptoms that any method of examination likely to aid in the differential diagnosis is worth any trouble its execution may entail. This work should aid materially in arriving at a correct diagnosis. The work is very timely and should prove of great value to the student and practitioner.

X-RAY OBSERVATIONS FOR FOREIGN BODIES AND THEIR LOCALIZATION. By Captain Harold C. Gage, A. R. C., O. I. P., St. Louis: C. V. Mosby Company. 1920. Price \$1.75.

This work is based on the observation of the author in his four years of study of War Radiology. Accurate localization of foreign bodies is of prime necessity to the surgeon who is to remove them. Mr. Gage's experience, his great skill, lend a great weight to this volume. The work while small contains a vast amount of every day practical value. It is well worth the price.

GENERAL INTRODUCTION TO PSYCHOANALYSIS. By Prof. Sigmund Freud, LL. B. Authorized translation by G. Stanley Hall; New York: Boni & Live-right. Price, \$4.50 net.

Dr. Freud in this work sets forth with a frankness almost startling the difficulties and limitations

of Psychoanalysis and also described its main methods and results as only a master and originator of a new school of thought can do.

Society Proceedings
COOK COUNTY

CHICAGO OPHTHALMOLOGICAL SOCIETY

A regular meeting was held November 17, 1919, with the President, DR. WILLIAM L. NOBLE, in the Chair.

REPORT OF THE COMMITTEE ON BASIS OF COMPENSATION FOR PARTIAL OR TOTAL LOSS OF VISION ON THE PART OF INDUSTRIAL EMPLOYEES.

DR. HARRY S. GRADLE submitted a tentative or temporary scheme, in accordance with a request made at the last meeting of the society, as a basis of compensation for employees for partial or total loss of vision which, he said, could be utilized until such time as the committee of the Ophthalmological Section of the American Medical Association made its report, which report, he hoped, would be adopted by the ophthalmologists of this country.

In submitting this report he said there were several fundamental things that were to be decided on as absolutely essential before formulating a basis for compensation. First, all vision is to be measured at a distance of twenty feet, using the illiterate chart of E. The committee was making up a series of charts recording vision of 20/20 up to 20/200. Second, at least, two months shall elapse between the disappearance of the last visible trace of inflammation and the time of examination upon which the report is to be based. In other words, an injury to the eye is to have as much a chance as possible to quiet down. Third, the best possible vision, with or without correcting glasses, shall be used, provided there not be a difference of more than 4 D. spherical refraction between the two eyes. If the difference is more than 4 D. spherical refraction, the best vision of the injured eye without glasses shall be the basis of compensation. Fourth, normal vision is considered as 100. Industrial blindness is 20/200 or less, and shall count as 10. Loss of an eyeball shall count as zero. In other words, the committee decided that 20/200 be the least possible vision with which the average individual can carry on his occupation; that industrial blindness does not entitle an individual to the same compensation as complete loss of an eyeball. The individual gets 10 per cent. for losing an eyeball in addition to loss for industrial vision.

The vision is recorded by the Snellen test, corresponding to visual efficiency in terms of 100, and the inverse of that or the visual loss in terms of 100.

The State law fixes the amount of compensation approximately to one year's salary. If a man has been injured in one eye and his vision is 20/40 for

that one eye, he has a visual efficiency of 89 and is entitled to 11 per cent. compensation.

Dr. Gradle submitted the following table:

20 110									
20	20	20	20	20	20	20	20	20	20
20	40	60	80	100	120	140	160	180	200
:	:	:	:	:	:	:	:	:	:
100	89	78	67	56	41	32	23	14	10
50									
				Visual efficiency			Visual loss		
20/20	100	.....	.....	.....	.....	.....	0	.....
20/30	94.5	.....	.....	.....	.....	.....	5.5	.....
20/40	89.0	.....	.....	.....	.....	.....	11.0	.....
20/50	83.5	.....	.....	.....	.....	.....	16.5	.....
20/60	78.0	.....	.....	.....	.....	.....	22.0	.....
20/70	72.5	.....	.....	.....	.....	.....	27.5	.....
20/80	67.0	.....	.....	.....	.....	.....	33.0	.....
20/90	61.5	.....	.....	.....	.....	.....	38.5	.....
20/100	56.0	.....	.....	.....	.....	.....	44.0	.....
20/110	50.0	.....	.....	.....	.....	.....	50.0	.....
20/120	41.0	.....	.....	.....	.....	.....	59.0	.....
20/130	36.5	.....	.....	.....	.....	.....	63.5	.....
20/140	32.0	.....	.....	.....	.....	.....	68.0	.....
20/150	28.5	.....	.....	.....	.....	.....	71.5	.....
20/160	23.0	.....	.....	.....	.....	.....	77.0	.....
20/170	18.5	.....	.....	.....	.....	.....	81.5	.....
20/180	14.0	.....	.....	.....	.....	.....	86.0	.....
20/190	12.0	.....	.....	.....	.....	.....	88.0	.....
20/200	10.0	.....	.....	.....	.....	.....	90.0	.....

He said there are many considerations apart from the vision in the injured eye; but the present State laws and the present Industrial Commission did not see fit as yet to recognize other things, such as vision to the uninjured eye, stereoscopic vision, and so forth.

The report of the Committee of the Ophthalmological Section of the American Medical Association would take into account all factors, and he hoped this final report would be accepted by ophthalmologists throughout the State.

He submitted the present report in the hope it would be of some value in helping the members out in their industrial work.

(To be continued.)

FULTON COUNTY

The ninety-first meeting of the Fulton County Medical Society was held in the auditorium of the Y. M. C. A. building at Canton, July 6th, and was called to order at 2:00 p. m. by President Coleman.

Drs. Adams, Herschle and Cluts were appointed Board of Censors pro tem.

Dr. R. H. Maguire was elected to membership.

Dr. H. A. Durkin of Peoria presented an interesting paper on "Pernicious Anemia."

Dr. R. E. Adkins of Springfield held a tuberculosis clinic. A number of patients were present and much valuable information was obtained as to early diagnosis.

Eleven members and two visitors were present.

JERSEY COUNTY

The Jersey County Medical Society met in regular session in Fieldon, Ill., Thursday, July 15, 1920.

At the business meeting the following officers were installed: President, A. B. Curry, Grafton; vice-president, B. M. Brewster, Fieldon; secretary-treasurer, C. F. Lewis, Jerseyville; censors, H. R. Bohanan, Jerseyville; H. F. Threlkeld, Jerseyville; and F. G. Warner, Grafton.

Six members were present.

CARL F. LEWIS, Sec'y & Treas.

MADISON COUNTY

Our June Meeting

The Madison County Medical Society met in Godfrey on June 11, 1920, with Dr. F. O. Johnson in the chair.

Thirty-two members and forty-two visitors were present.

On invitation of Dr. Zeller, our next meeting will be held at the Alton State Hospital. A letter from J. W. Becker, on Modern Health Crusade, was read and referred to our next meeting. The report of the Community Nurse was read and ordered filed. The report of our State Delegate, Dr. W. H. C. Smith, on proceedings of the last House of Delegates, was accepted. Dr. Smith also moved that the secretary be instructed to write to our delegates in the Constitutional Convention, asking them to support Proposal No. 300. Carried. On motion of Dr. Homer Davis, each member is requested to write a similar letter and a committee of one in each community was appointed to see that this request is complied with.

The president's annual address on "Medicine and Surgery as a Profession," was delivered by Dr. F. O. Johnson and was well received, and on motion it was ordered to send it to the ILLINOIS MEDICAL JOURNAL for publication.

Each of our distinguished visitors was called upon for a short talk and the great majority responded. These talks were interesting and highly appreciated.

Dr. and Mrs. Smith served delightful refreshments and were tendered a unanimous vote of thanks for their genial hospitality.

On motion, adjourned to meet at the Alton State Hospital on July 2, 1920.

RANDOLPH COUNTY

Society met in Tilden City Park, July 10, 1920. Ten members and seven visitors present.

After an excellent dinner served by the ladies, the annual election of officers resulted as follows: President, H. A. E. Ivbgkqj cmfwyp shrdlu cmfwyp hrdluu ident, H. L. LeSaulnier; vice-president, J. W. Robertson; secretary and treasurer, L. J. Smith; censors, Stanley, Hoffmann, and Hendrickson.

The president reappointed the old legislative committee, consisting of Fritze and C. G. Smith.

On motion the secretary was instructed to write to the committee on constitutional convention that Randolph County Medical Society unanimously requests that "Proposal 300" be made a part of the Illinois new constitution and that the request be signed by names of our twenty-five members.

On motion the president appointed a committee of three to draft a county minimum fee bill. Stanley, Hoffmann, and J. W. Robertson were appointed.

A very much appreciated talk by the Rev. Mr. Ryan on "Quacks and the Medical Profession" was followed by each member on like topics.

Dr. H. T. Drake was elected to membership and Dr. J. W. Kimball presented his application for membership.

Resolutions thanking Drs. Stanley and Drake and the ladies for their hospitality and the excellent lunch were unanimously voted and each member felt that the Tilden meeting was a very pleasant one.

On motion, society adjourned to meet at Fort Chertres, in August, day to be set later.

L. J. SMITH, Sec'y.

Personals

Dr. Frank Allport, Chicago, has recovered from an illness of several weeks.

Dr. J. B. Liston, of Carlinville, has been re-appointed health officer for Macoupin county.

Dr. Clifford P. McCullough, Lake Forest, sustained a severe cut in the face by being accidentally struck with a golf club.

Dr. Edmond R. Moras, formerly a practitioner in Chicago, was adjudged insane in Highland Park, July 6.

Dr. T. W. Burroughs of Ottawa had a narrow escape from serious injury when his automobile was crushed by a street car last month.

Dr. Harry S. Holmes of Lincoln was stabbed by a young tough whom he had reproofed for using insulting language in the presence of ladies.

Dr. Morris Fishbein was elected secretary-treasurer of the Society of Medical History of Chicago to succeed the late Dr. Stanton A. Friedberg.

Dr. James J. Moorhead, surgeon and research worker, formerly of Chicago, is now surgeon in chief to St. Anthony's Hospital, Terre Haute, Ind.

Dr. and Mrs. Kellogg Speed sailed for France

July 3. Dr. Speed is one of the delegates from the United States to the International Surgical Congress which meets in Paris, July 19.

Dr. George G. Zoehrlaut has been appointed a special deputy collector of internal revenue, and will have charge of collecting taxes on motor boats in the Chicago district.

Dr. John H. Rice, of Quincy, has been compelled to terminate a practice of thirty years on account of failing eye sight. He is spending the summer with his brother, Dr. D. H. Rice, at Colorado Springs.

Dr. J. W. Osborne, of Champaign, recently recovered his Chandler automobile stolen October 12, 1918. It was located at Galesburg in possession of a business man who bought it from a local dealer.

Physicians of Green county compromised their claims for attending smallpox patients through a committee of arbitration of three citizens. Original claims for \$3,031.50 were settled for \$2,220.80. Some cases were declared not to be charity cases and bills for vaccination were not allowed.

Ernest W. Johnson, an assistant in the office of Dr. George C. Hunt, chief ambulance surgeon of the police department of Chicago, was arrested by the department of registration and education for practicing medicine without a license. On July 13, he entered a plea of guilty in the municipal court of Chicago and was fined \$50 and costs.

Dr. Norman Bridge is passing his convalescence from an illness of several weeks in Chicago putting the finishing touches on an autobiography which will appear at an early date under the title: "The Marching Years." His many friends will be pleased to hear of his recovery and will anticipate another book from his pen with especial interest. The title promises the details of some great events both in medicine and public affairs in which Dr. Bridge, like Aencas, has had a "great part."

News Notes

—It is said that the U. S. General Hospital No. 28, at Fort Sheridan, will be closed October 1.

—The Federated Orthodox Jewish Charities of Chicago won their campaign for \$100,000, June 24, when \$65,000 in cash and \$35,000 in pledges were turned in by workers.

—The chiropractors must pay more for traveling than for rent, judging by the way the State department of registration and education makes the quacks "move on."

—Dr. Arthur L. Blunt is said to be in Chicago on parole from Fort Leavenworth on his promise to turn state's evidence against Dr. Sage, formerly of the narcotic squad.

—The Moline city council on July 8 passed an ordinance providing for the establishment of a city venereal disease clinic and for making venereal disease reportable. The clinic will be under the supervision of Dr. David E. Kohler.

—The estate of Dr. Harry J. Haiselden is said to be richer by \$170,000 than was supposed at his death a year ago, on account of the increase in the value of cotton which he purchased through a broker.

—Under the charge of Dr. Clarence W. East, Springfield, head of the division of child hygiene of the state board of health, twenty-two clinics for crippled children have been established in Illinois with a total attendance of 1,600.

—It is reported that a Japanese, named T'Aso, recently pleaded guilty in court of selling certificates of the Chicago Hospital College of Medicine for \$250 each. A raid of T'Aso's room is said to have uncovered sixteen blank diploma's, seals, stamps and other paraphernalia.

—The medical department of the University of Illinois through its dean, Albert C. Eycleshymer, extends a cordial invitation to members of the profession to make free use of its library on the ground floor of the college building at Congress and Honore streets, Chicago. It contains many standard works and subscribes to about 300 periodicals.

—Dr. O. W. McMichael, formerly of Naperville, and later of Winyah, and Dr. Edwin B. Tuteur, one of the founders of Valmora Sanitarium for Tuberculosis, in New Mexico, and consultant to the Municipal Tuberculosis Sanitarium in Chicago, have established the Chicago

Tuberculosis Laboratories at 32 N. State Street, with complete equipment for every phase of diagnostic and therapeutic work in tuberculosis.

—The public hearings given physicians and midwives who fail to report births by the Chicago Department of Health is said to be bringing in reports "in bunches." The idea seems to be to hand out a warning at the first offense and to start suits if caught failing to report a second time. The "court" is composed of Drs. M. O. Heckard and H. O. Jones of the Department of Health and Assistant Corporation Counsel Edgar A. Jonas. Many of the midwives, some even who have been in this country for years, do not speak English.

Marriages

EVERETT CLYDE KELLY, Peoria, to Miss May Gilfillan of Chillicothe, June 5.

BENEDICT ARON to Miss Edith Cohen, both of Chicago, July. 1.

BENJAMIN AUGUSTUS to Miss Anna Beatrice Davidson, both of Chicago, recently.

BENJAMIN BARKER BEESON to Miss Mildred Helen Bronson, both of Chicago, recently.

JAMES N. DOWNS to Miss Mary B. Stauffer, both of Bloomington, recently.

FREDERICK HOWARD FALLS, Chicago, to Miss Margaret Haseltine of Berkeley, Calif., recently.

SAMUEL MARMON to Miss Ethel Perlman, both of Chicago, recently.

LEON WADE MARTIN to Miss Eleanor Marie Pickel, both of Chicago, July 7.

BENJAMIN KADISH to Miss M. Saplitzky, both of Chicago, June 27.

Deaths

WILLIAM WATSON WETHERLA, Chicago; Chicago Medical Society, 1885; a Fellow, A.M.A.; aged 71; died, June 2, from cerebral hemorrhage.

JOHN W. PORTS, Lacon, Ill.; Eclectic Medical Institute, Cincinnati, 1871; aged 75; a veteran of the Civil War; died, June 13, from myocarditis.

ROBERT EDWARD LEE JESSEE, Philo, Ill.; Northwestern University Medical School, Chicago, 1896; a Fellow, A.M.A.; aged 49; died, July 3, from heart disease.

SAMUEL JOHN HICKS, Ivesdale, Ill.; Miami Medical College, Cincinnati, 1890; aged 57; a member of the Illinois State Medical Society; died, July 4, from cerebral hemorrhage.

MARIA LOUISE DE PEW CROTHERS, Bloomington, Ill.; Woman's Medical College of Pennsylvania, Philadelphia, 1883; aged 86; for four years in charge of the Girls' Industrial Home of Bloomington; died, May 31.

ALFRED T. LEVICK, Mt. Vernon, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1876; Missouri Medical College, St. Louis, 1883; aged 74; died, July 3.

JOHN HARRIS WERNER, Chicago; Chicago College of Medicine and Surgery, 1911; a Fellow, A.M.A.; aged 46; died, June 21, from septicemia, following a wound received while performing an operation.

JAN D. NOVAK, Chicago; University of Prague, Czechoslovakia, 1896; College of Physicians and Surgeons, Chicago, 1897; in practice in Chicago from that date; aged 46 years; died, June 16, from heart disease following influenza.

JOHN FRANKLIN CAMPBELL, Chicago; Victoria University, Cobourg, Ont., 1886; L.R.C.P., L.R.C.S., Edinburgh, 1890; a Fellow A.M.A.; aged 56; a specialist on diseases of the eye, ear, nose and throat; died, July 14, from angina pectoris.

ROBERT SHELBY COWAN, Girard, Ill.; St. Louis Medical College, 1867; aged 87; a charter member of the Macoupin County Medical Society; a surgeon of Third Missouri Volunteer Cavalry during the Civil War; for three terms mayor of Girard; died, June 18.

JAMES P. LYNCH, Chicago; Bennett College of Eclectic Medicine and Surgery, Chicago, 1883; aged 63; a member of the Illinois State Medical Society; died, June 26, from septicemia following an infected wound of the finger.

JOHN W. STEWART, Rock Island, Ill.; University of Pennsylvania, Philadelphia, 1867; aged 75; since 1869 a hardware merchant and real estate dealer of Rock Island; president of the Rock Island Humane Society; died in Estes Park, Colo., July 16, from pneumonia.

OLIVER P. HOPPING, Mt. Pulaski, Ill.; Illinois Medical College, Chicago, 1896; Missouri Medical College, St. Louis, 1897; aged 50; died at St. Johns Hospital, Springfield, Ill., June 11, from pneumonia following influenza.

FINLEY ELLINGWOOD, Chicago; Bennett College of Eclectic Medicine and Surgery, Chicago, 1878; aged 68; professor of chemistry from 1884 to 1900, and of materia medica and therapeutics from 1900 to 1907 in his alma mater; editor of the *Chicago Medical Times* from 1884 to 1906; author of several textbooks on eclectic materia medica and therapeutics; died at Pasadena, Cal., June 29.

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Original Articles

DIPHTHERIA IMMUNIZATION.*

ARTHUR G. BOSLER, M. D.,
CHICAGO.

In no acute disease, pneumonia possibly excepted, has there been so much experimental work done and so much written within the past ten to fifteen years as in diphtheria; and in no other disease has the labor resulted in so much definite knowledge and positive results. The stimulus which prompted this labor was the well-recognized fact that the mortality rate of diphtheria was altogether too high for a disease the cause of which was definitely known and for which there was a specific therapeutic agent. While it is true there was a marked reduction in the mortality rate following the advent of diphtheria antitoxin, yet the fact remains that year after year the diphtheria death rate is altogether too high for a disease whose etiology was an open book and whose cure was only a matter of the early use of antitoxin in sufficient dosage.

It has been evident for some time that isolation and quarantine of cases and carriers and the use of antitoxin, both as a curative and prophylactic agent, have been inadequate in materially lowering the diphtheria death rate, and that the solution of the problem must be sought elsewhere. Fortunately, in my opinion, it has been found in active immunization by the use of the toxin-antitoxin mixture.

The idea of producing active immunization is not new and many workers in this field had succeeded in producing an active immunization in animals by the use of neutral mixtures of toxin and antitoxin previous to Theobald Smith,¹ who in 1909 reported that he had obtained an active immunization in guinea pigs lasting several years, and who at that time was the first to suggest the use of a toxin-antitoxin mixture in man.

Von Behring² was the first to apply this suggestion by Smith on a large scale and to send out mixtures for use. According to Veeder,³ Hahn, using Von Behring's mixtures, was the first to attempt immunization in man, reporting his results in 1913 at the meeting of the Kongress für Innere Medizin at Wiesbaden.

In 1913 Schick⁴ published his results with the intradermal application of diphtheria toxin and its relation to immunity and susceptibility. His work marked a distinct advance in the study of immunology, for the simplicity of this test and its reliability provided an easy and reliable means of determining susceptibility and immunity and a guide to the results of toxin-antitoxin injections. Heretofore it had been necessary to determine the amount of antitoxin in the blood by Römer's method, or some modification of same, a laboratory procedure. That the Schick test is thoroughly reliable has been amply attested.⁵

Inherited Passive Immunity. That the newborn infant is immune to diphtheria in from 80 to 90 per cent. of cases and that this immunity is derived from the mother has been shown by Kassowitz and Groer⁶ and Zingher.⁷ Likewise, clinically, diphtheria is rare under one year. Rolleston⁸ in a study of 2,600 consecutive cases of diphtheria at Grove Hospital in London found only 20, less than 1 per cent., under one year. Of these, seven were under six months and thirteen from seven to eleven months. The mortality of cases under one year was 45 per cent., as compared with 7.3 per cent. of the total cases over one year. The protection afforded the new-born infant is a passive immunity and lasts, in the majority of cases, only from six to nine months. Some retain this mother-conferred immunity for one year to eighteen months.⁷ The time of greatest susceptibility is between one and five years, this period showing the highest percentage of positive Schick reactions, clinically the largest number of cases and by mortality statistics the highest percentage of deaths. The mortality from

*Read before the Chicago Pediatric Society, March 9, 1920.



Fig. 1. +++ Schick.
Photo taken on twelfth day.

diphtheria in New York City from 1891 to 1900 shows under fifteen years 17,846, of which 14,553, or 81.5 per cent., were under five years. From 1901 to 1917, of a total mortality of 29,813, 11.5 per cent., or 23,150, occurred under five years.⁷

Passive Immunity by the Use of Antitoxin. The passive immunity conferred by the injection of antitoxin is of short duration and cannot be relied upon after ten days. Kohnar and Moshage⁹ studied the duration of immunity conferred by the injection of 1,500 units of antitoxin in 106 children, ages two months to three years (being 100 to 400 units of antitoxin per kilo of weight), and found it apparently effective for ten days, after which the immunity rapidly diminished and practically disappeared after four to six weeks. In 362 scarlet fever patients receiving 2,500 units of antitoxin it was found to confer a shorter immunity and 10 per cent. were found susceptible within ten days. In a study of 350 cases of diphtheria, ages 2 to 15 years, and receiving an average dose of 45,000 units, 17.2 per cent. were positive in from one to five days and 25.5 per cent. in from five to ten days. As a whole they were found just as susceptible after the attack of diphtheria as before. That an attack of diph-

theria confers an immunity of short duration, or none at all, is a well-known clinical fact.

Natural Immunity. Clinically it has been known that certain persons have a natural immunity to diphtheria. They may harbor virulent germs, but fail to contract the disease. Zingher⁷ has shown that beginning at about eighteen months, but more especially after six years, an increasing number of children acquire this natural immunity, which in adult life reaches 80 to 90 per cent. Likewise he has shown that the development of this natural immunity is most likely permanent. Over 3,000 children giving a negative Schick at first test were retested over a period of three years and in practically all the negative reaction persisted. A few, 1 to 2 per cent., showed a positive on retest. These he considers borderline cases.

Active Immunization by the Use of the Toxin-Antitoxin Mixture. Shortly after Von Behring published his results in active immunization with a toxin-antitoxin mixture Park and Zingher began experiments along these lines. Their work has been very extensive and painstaking and their findings prompted various health boards to undertake this work and give it publicity. To date of December, 1919, the Chicago Department of Health has used toxin-antitoxin in approximately 6,000 children of the schools of this city with no bad results so far as it has been able to ascertain.¹⁰ In this connection it may be well to call attention to the unfortunate Dallas accident.¹¹ In that series forty-seven severe reactions followed the use of a toxin-antitoxin mixture furnished by a certain manufacturer. The children receiving this product manifested high temperatures, vomiting and pain at the site of the injection, which occurred a few hours after administration. Five deaths occurred in this series within twelve to sixteen days. Park¹² tested some of this mixture and found that it killed guinea pigs in 1/10 c.c. This accident will undoubtedly cause manufacturers to be more careful in the future.

Personal Experiments. Using the Schick test as a means of determining susceptibility the writer began, in January, 1917, to secure a number of susceptibles, immunizing them with a toxin-antitoxin mixture and retesting for results. Only such persons were selected as could, with a reasonable degree of certainty, be relied upon



Fig. 2. Immunized July 12, 1917.
Schicked Jan. 25, 1918.
Photo taken Feb. 8, 1918.
Was negative May, 1918.
Was negative Oct. 14, 1919.

to submit to subsequent retests, and who could be watched for a period of time, the object being to study the reaction, both immediate and remote, of the toxin-antitoxin injections and to secure a series of cases actively immunized, and by future Schick retests to determine the duration of such immunity.

All were selected from private practice, save fifty nurses from the Englewood Hospital. At this time, January, 1917, this work (diphtheria immunization) was not so well known as it is at the present and, so far as the writer knows, the

use of the toxin-antitoxin mixture in this series of cases was the first used in the city of Chicago, the Department of Health starting their work in November, 1917.¹⁰

The toxin for the Schick tests in my series of cases was supplied by the Illinois State Board of Health and the Chicago Health Department laboratory. The toxin-antitoxin mixture used was Parke, Davis & Co.'s "Diphtheria Prophylactic," each injection of one c.c. representing 5 L+ doses of diphtheria toxin over-neutralized with antitoxin.

In all 122 were Schick tested (see table No. 1), 68 adults and 54 children. Of the 68 adults 26 were positive, or 38.2 per cent. Of the 54 children (3 to 14 years), 15 were positive, or 27.7 per cent. An unusually large percentage of positives was found among the Englewood Hospital nurses, ages 18 to 30 years. Out of fifty nurses twenty-three were positive, or 46 per cent., and eighteen

TABLE NO. 1. SCHICK REACTIONS.

ADULTS 68.			
	Positive	Negative	Per Cent Positive
Males	1	7	} 38.2
Females	25	35	
CHILDREN 54.			
Age 2 to 15 Years.			
Males	6	17	} 27.7
Females	9	22	
Total	122	41	
			81

TABLE NO. 2. IMMUNIZING RESULTS WITH TOXINE-ANTITOXINE MIXTURE.
CHILDREN

Case No.	Age	Sex	Date of Schick Test and Result	Date* Immunized With T. A. Mixture	Reaction to T. A.	Date of Schick Retest and Result	Date Schick Retest and Result	Date Schick Retest and Result
1	6	M	1-28-17 +	2- 8-17	1	5- 7-17 —	5-25-18 —	10-14-19 —
2	6	M	1-28-17 +	2- 8-17	1	5- 7-17 —	6-10-18 —	10-14-19 —
3	6	M	1-12-17 ++	1-16-17	2	4-28-17 —	6-10-18 —	10-14-19 —
4	12	M	1-12-17 +	1-16-17	1	4-28-17 —	6-10-18 —	10-14-19 —
5	13	M	1-12-17 +	1-16-17	1	4-28-17 —	5-25-18 —	10-14-19 —
6	14	M	1-12-17 ++	1-16-17	1	4-28-17 —	6-10-18 —	10-14-19 —
7	3	F	1-28-17 +	2- 8-17	1	5- 7-17 —	6-10-18 —	10-14-19 —
8	4	F	1-28-17 +	2- 8-17	1	5- 7-17 —	6-10-18 —	10-14-19 —
9	4	F	1-28-17 +	2- 8-17	1	5- 7-17 —	6-10-18 —	10-14-19 —
10	7	F	1-28-17 ++	2- 8-17	2	5- 7-17 —	6-10-18 —	10-14-19 —
11	10	F	2-22-17 +	3- 2-17	1	7- 2-17 —	6-10-18 —	
12	10	F	1-28-17 +	2- 8-17	1	5- 7-17 —	6-10-18 —	10-14-19 —
13	11	F	2-22-17 ++	3- 2-17	2	7- 2-17 —	5-25-18 —	10-14-19 —
14	14	F	2-22-17 ++	3- 2-17	2	7- 2-17 —	6-10-18 —	
15	14	F	1-28-17 +	2- 8-17	1	5- 7-17 —	6-10-18 —	10-14-19 —

ADULTS.

16	18	M	1-28-17 ++	2- 8-17		7- 2-17 —	6-10-18 —	10-14-19 —
17	18	F	5- 7-17 ++	5-19-17	1	9-15-17 —	5-24-18 —	10-14-19 —
18	19	F	4-28-17 +	5- 1-17	1	9-15-17 —	6-10-18 —	
19	19	F	10- 9-17 ++	10-20-17	2	1-26-18 +	5-24-18 —	10-14-19 —
20	19	F	10- 9-17 ++	10-20-17	2	1-26-18 —	5-24-18 —	10-14-19 —
21	20	F	10- 9-17 ++	10-20-17	2	1-26-18 —	5-24-18 —	10-14-19 —
22	20	F	7- 2-17 ++	9- 1-17	4	1-26-18 —	5-24-18 —	10-14-19 —
23	20	F	10- 9-17 +	10-20-17	1	1-26-18 —	5-24-18 —	10-14-19 —
24	21	F	4-28-17 ++	5- 1-17	2	1-26-17 —	6-10-18 —	
25	21	F	4-28-17 ++	5- 1-17	4	11-11-17 —	6-10-18 —	10-14-19 —
26	21	F	5-12-17 ++	5-19-17	2	11-11-17 —	6-10-18 —	10-14-19 —
27	21	F	5- 7-17 +	5-19-17	1	9-15-17 —	1-26-18 —	10-14-19 —
28	21	F	7- 2-17 +	7-12-17	1	1-26-17 +	5-24-18 —	10-14-19 —
29	21	F	7- 2-17 +	9- 1-17	2	1-26-18 —	5-24-18 —	10-14-19 —
30	21	F	5-12-17 ++	5-19-17	1	10- 9-17 +	1-26-18 —	10-14-19 —
31	22	F	5- 7-17 ++	5-19-17	3	11-22-17 —	5-24-18 —	10-14-19 —
32	22	F	5- 7-17 ++	5-19-17	4	11-22-17 —	5-24-18 —	10-14-19 —
33	22	F	7- 2-17 +	9- 1-17	2	1-26-27 +	5-24-18 —	
34	23	F	5- 7-17 ++	5-19-17	3	10- 9-17 —	5-24-18 —	10-14-19 —
36	24	F	5- 7-17 ++	5-19-17	2	9-15-17 —	5-24-18 —	
36	25	F	5- 7-17 ++	5-19-17	2	9-15-17 +	5-24-18 +	5-24-19 —
38	27	F	5- 7-17 ++	5-19-17	2	9-15-17 —	5-24-19 +	5-24-19 +
38	28	F	5- 7-17 ++	5-19-17	2	9-15-17 —	5-24-19 —	10-14-19 —
39	28	F	3- 9-17 ++	3-17-17	4	6-27-17 —		10-14-19 —
40	29	F	3- 9-17 ++	3-17-17	2	6-27-17 —	5-24-19 —	10-14-19 —
41	30	F	4-28-17 ++	5- 1-17 (One inject'n only)	9-15-17 +			

* Three injections made, seven days apart. Date of first given.

+ = Positive, a definite reaction, redness and fading earlier.

++ = Decidedly positive, redness, etc., more marked and lasting.

+++ = Strongly positive, redness strongly marked, infiltration more marked and reaction lasting 2 to 4 weeks or longer.

1. Slight or no local and no constitutional reaction.

2. Slight local and mild or no constitutional reaction.

3. Local reaction, redness and swelling, and constitutional symptoms, malaise and temperature to 101.

4. Marked local reaction, redness and swelling involving greater part of arm, with pronounced constitutional symptoms, chills, prostration and temperature 101 to 104.

of them gave a 2 or 3 plus reaction. Recently, January, 1920, twelve new nurses were Schick tested in anticipation of presenting a positive Schick before the Englewood Branch, Chicago Medical Society, and six were found positive, one showing the combined reaction, pseudo and positive. Zingher⁷ shows that at St. Joseph's Institute, out of 112 boys, ages 10 to 15, only one was positive, and, as he states, "This will explain why diphtheria seems to be a relatively rare disease in some institutions." My findings at the Englewood Hospital may also explain why large numbers of cases occur in some institutions.

The Schick test reactions were graded into three degrees of intensity:

+ = Positive: a definite reaction, redness and fading earlier.

++ = Decidedly positive, redness, etc., more marked and lasting.

+++ = Strongly positive, redness strongly marked, infiltration reaction lasting 2 to 4 weeks.

The toxin-antitoxin injections were made in the arm and three injections were given at seven-day intervals. The severity of the immediate reactions has been graded from 1 to 4:

1. + Slight or no local and no constitutional reaction.

2. + Slight local and mild or no constitutional reaction.

3. + Local reaction, redness and swelling, and constitutional symptoms, malaise and temperature to 101.

4. + Marked local reaction, redness and swelling involving greater part of arm, with pronounced constitutional symptoms, chills, prostration and temperature 101 to 104.

Among the children no severe reactions were observed, eleven showing No. 1 and four No. 2. Among the adults severe reactions were frequently seen, nineteen out of twenty-six showing No. 2 to No. 4. The local reactions in adults were for the most part severe and consisted of marked swelling, induration and redness, extending in some instances from the shoulder to the elbow, and in two or three assuming a cyanotic (purple) appearance. Two young ladies working in large mercantile houses were sent home by the house physician, one with a diagnosis of erysipelas and the other blood poison. The constitutional symptoms were characterized by temperature from 100 to 104, chills, malaise, prostration,

and in one instance by delirium. The second and third injections were on the whole less marked than the first, but in several the reactions were just as severe and in one case more so. Four of the nurses complained of sore breasts on the side where the injection was made and in one instance a definite lump appeared. The swelling disappeared before the time of the next injection and the breast again became sore, but no lump appeared. In several instances the Schick reaction, now 12 to 15 days old and fading, became bright red again after the t-a-injection.

It was noted that those giving the more pronounced Schick gave, as a rule, the more pronounced reaction to the toxin-antitoxin. Also those giving the severer reactions to the toxin-antitoxin were more likely to become immune at an earlier date. The only case (37) giving a positive Schick on retest one and a half years after immunization was one giving a No. 1 reaction to the mixture.

As corroborative evidence as to the value and reliability of the Schick test the following incidents were noted. Several who were found negative at the first test later harbored virulent diphtheria germs and showed no signs of the disease. In one instance a boy seven years old contracted diphtheria. A sister, nine, and a brother, four years old, were tested and found negative. They were left in contact with the case, both become carriers, but failed to contract the disease. Among the nurses at the hospital one (case 30) was immunized May 19, 1917, and gave a No. 1 reaction to the injection. She was retested October 9, 1917, and was still positive. She was reimmunized Nov. 22, 1917, and contracted a mild type of diphtheria on January 2, 1918. Highest temperature 99.2 and toxic symptoms very slight, although a definite and characteristic membrane appeared. Antitoxin was not administered until the third day, at which time I saw her. The case was culture proven and sent to the isolation hospital. Every nurse in the hospital was cultured and two carriers were found. One of these had given a negative Schick at first test and the other had been immunized about three months before and gave a negative about one week previous to the time she was found to be a carrier. In no case showing a negative Schick, either before or after immunization, has a case of diphtheria developed.

Immunizing Results of Toxin-Antitoxin. Of the fifteen children immunized twelve were injected the middle of January and 8th of February, 1917. They were Schick retested in April and May, 1917, and all were negative. Three were immunized March 2, 1917, and were Schick negative July 2 of the same year. They were all retested in May and June, 1918, and all were negative. Twelve of the fifteen were available for retesting October 14, 1919, and all were negative. Of the twenty-five adults, five were still positive on retest made two to six months after immunization. One case (36) was still positive one year after immunization, but a year later was found negative. Only one case (37) was still positive at the last retest, made one year and seven months after immunization. Of the forty cases immunized thirty-two were available for the last retest made from one year and seven months to two years and nine months after immunization and all but one was found negative. Case 41 showed a strongly positive Schick and gave a No. 3 reaction to the toxin-antitoxin injection. She refused the second injection on account of the severity of the reaction to the first. She was Schick retested four months later and found positive.

A RECENT REPORT FROM DR. WM. H. PARK.

In answer to an inquiry as to the percentage of Schick negatives at the last retest in the New York series, Dr. Park, under date of January 16, 1920, states: "Two institutions have been tested for four or slightly more than four years. In the last test there were seventy-six children with an average 97 per cent. Of immunity; in one institution there was 100 per cent. and in another a little less than 95 per cent. In first immunizations we have had from 70 to 90 per cent. immunized at the end of three to six months; the tendency has always been to increase the per cent. of immunity as the years pass. This gives hope of a permanent immunity. It may interest you to know that we have injected two thousand two hundred infants during the first ten days of their lives, with full doses, but the results as to immunity were disappointing as only 50 per cent. were immunized at the end of the first year."¹²

CONCLUSIONS.

1. The administration of toxin-antitoxin gives, in 90 to 97 per cent. of the cases, an im-

munity which lasts over four years, in all probability longer and possibly for life.

2. The immunizing action of toxin-antitoxin is slow and protection does not result for from 2 to 6 months and in some cases longer. Consequently, in cases exposed to diphtheria, antitoxin should be given (*only to children showing a positive Schick*) to afford immediate protection, bearing in mind that its protecting action is of short duration. The indiscriminate use of antitoxin as a prophylactic measure in cases of adults exposed is wrong, and its use in the aged is to be condemned, the opinion of various health boards notwithstanding.

3. The reactions to the toxin-antitoxin mixture are apt to be severe in adults. It is an open question whether adults should be immunized, even though they show a positive Schick, unless in cases of nurses and others who are apt to be frequently exposed.

5. The mixture, in full doses, is well borne by children. Infants under six to nine months should not be immunized, unless it be with the distinct appreciation of the fact that immunity occurs in only 50 per cent. of the cases; the immunizing action of the toxin-antitoxin being hindered by the presence of inherited antitoxin. Children between nine months and two years should be immunized irrespective of the Schick reaction at the time. Children between two and fifteen years should be Schick tested, and only those giving a positive should be immunized.

6. The toxin-antitoxin mixture should be prepared in a reliable laboratory and before being sent out should be carefully tested for potency and toxicity. The Dallas accident should have no repetition and a valuable agent should not suffer on account of a non-potent product given out under its name.

7. In furthering the work of stamping out diphtheria the co-operation of the family physician and the various Boards of Health is very essential.

8. While time and future investigations may throw more light upon the subject of active immunization the work done up to the present sustains the conclusion that *the universal use of toxin-antitoxin in early life bids fair to do for diphtheria what vaccination has done for small-pox.*

I desire to express my thanks and appreciation

to Dr. E. T. Olsen and Miss Mary Anderson of the Englewood Hospital for the assistance and consideration shown me.

720 West 61st street.

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DOCTORS AND THE PUBLIC HEALTH*

C. W. LILLIE, M.D.

Health Commissioner

EAST ST. LOUIS, ILL.

That doctors do more for the public without compensation than any other class is beyond question.

That doctors ever connive at any such vicious practices as have been recently charged by lobbyists at the Constitutional Convention, where it has been openly stated that they deliberately encourage the exposure of non-immune persons to infectious disease in order to increase their own professional business, is a lie so patent to all who know the facts that it becomes scarcely worthy of mention, were it not for the fact that it will be given credence by the ignorant.

Another false and vicious charge that is calculated to do far more harm to the public than it can possibly do the doctors, is that they insist upon vaccination "for revenue only." This charge is so absurdly ridiculous that it is a wonder that any could be found to make it. Any doctor engaged in the active practice of medicine could make more money by treatment of a single case of smallpox than he will get in a year from vaccination.

With so much to be said in favor of doctors

it might well be thought there was nothing to criticise in the medical profession. Indeed, it may be questioned whether the points to which I will refer can not be classed as "suggestions" rather than "criticisms."

The doctor has rare opportunity for observation of the conditions under which the people are living and yet it is comparatively seldom that a doctor presents anything bearing upon this subject at the Society meetings, and yet he is greatly interested in the better housing and living conditions of his clientele.

Doctors are especially vitally interested in every feature of civic life, especially in the cities, towns and villages, and might well be more active in the various campaigns for community betterment. All matters of "public policy" are fit topics for discussion at Society meetings, and a committee on "public policy" consisting of wide-awake, up-to-date members, should be always ready to offer suggestions as to matters in which the Society should take action. Such a committee should find much to do in aid of public health.

The importance of accurate reports of births and deaths does not seem to be generally recognized by the layman, and in some cases even the doctors do not appear to observe its value to the individual and to the state. In many birth certificates received by registrars there are numerous errors and deficiencies.

There are several ways in which doctors may help a Health Department and prove of great benefit to the citizens of the community in which they live.

First, by being careful to write plainly every detail connected with births and deaths coming directly under their observation.

I lay particular stress upon the word *plainly*, for the reason that I have found that many doctors, in filling out blanks for birth and death certificates, write in such a manner that it is frequently undecipherable.

It is even found at times that the signature could not be read unless one is familiar with the names of the doctors.

If doctors could only be brought to realize that they are writing records for permanent use and in which accuracy is the essential feature; that no record of this kind and no detail of any record is unimportant; that every item that

*Read before the Seventieth Annual Meeting of the Illinois State Medical Society at Rockford, May 19, 1920.

is asked for by the blanks is necessary for a proper understanding of the Vital Statistics of the community, this would not occur.

It may be that some of the information called for in any particular case may not be needed for years, and if the information given by the doctors is written with poor ink, or if illegible, the value of the certificate may be entirely lost. And these certificates are extremely important to the individual during life, and may be of inestimable value in the settlement of an estate.

We have recently seen during examination for army service how difficult it is to determine the exact age of many persons who cannot show a clear certificate of birth.

The same conditions are found to enter largely into the affairs of civil life; entering school, and into a business life requires a definite statement as to age, and unless this is forthcoming a delay may occur, and often to the embarrassment of the person whose birth records are wanting or incomplete.

In a statement of claims to the War Risk Insurance the exact date of birth of all children is required, and a failure to supply the necessary information is certain to cause delay and perhaps result in great hardship to the beneficiary.

There is another subject of high importance in which doctors have been found to be neglectful; that is, the reporting of communicable diseases.

Here we find all phases of the subject, from absolute failure to mere tardiness.

It has been found that in tuberculosis the report is often delayed until the death of the patient is near or has actually occurred.

In other communicable diseases epidemics have been caused through the failure to report a case.

These are some of the items chargeable against doctors, and in conclusion I would earnestly appeal to them to aid in removing the stigma of "non registration area" from our state.

Emphasis is laid upon the following:

1. Report all births within ten days.
2. Fill all blanks on birth and death certificates.
3. Write plainly, remembering that it is for a permanent record and may only be needed long after the doctor is dead.
4. Report all reportable diseases promptly,

bearing in mind that your duty extends beyond the care of the individual patient.

233 Collinsville Avenue.

DISCUSSION

Dr. C. C. Kost (Dixon): I just simply wish to emphasize that word "plainly" that the Doctor emphasized.

Dr. McClanahan (Viola): Just a little incident to show the importance of reporting work. We have had a law that said births should be reported for many years.

I have a brother who is a medical missionary in Egypt. They told him if there couldn't be found a record of his birth in our county seat where he was born he would have to go to Washington to get a special permit from the State Department, but I happened to find that birth record; it had been reported, fortunately.

SHOULD THE MEDICAL PROFESSION ORGANIZE—OR BE BOLSHEVIZED? VOTES, VOTES, AND MORE VOTES.

G. FRANK LYDSTON, M. D.,
CHICAGO.

Some months since I published the statement that in America the medical profession was the weakest link in the "bourgeois" chain. As usual, I was accused of being an alarmist. Now that the shadow of the bolshevistic hawk is hovering over the medical barnyard, the medical fledglings and booby birds are frantically seeking for "cover." There is much talk about medical "unions," medical "organization," etc., etc.,—fetiches—symbols to conjure with and solicit the protection of the gods, albeit the gods themselves are impotent in the face of stupidity.

We are told that we must organize for defense against the rapacity of insurance companies, corporations, and like evil things. Isn't that amusing? What percentage of the profession is interested in such matters? What about a hundred different abuses of which the vast majority of the rank and file are victims? What about the doctors who serve the public, especially in various institutions, for nothing—and take a civil service examination for the privilege? Are not the insurance companies and big corporations, who pay next to nothing, at least as benevolent as public service institutions that pay nothing? Speaking of "next to nothing," compare the salaries paid by our health department with the wages of the "white wings" who clean the streets. (Please do

not drag the wages of bricklayers, plumbers, sewer builders and carpenters into the argument, and don't even mention the scrub women at the County Hospital.)

It is noteworthy that, whenever the public press quotes somebody or other as advocating a doctor's "union," certain medical men always break into print the next morning with profuse apologies and explanations, apparently fearing that the public may suspect that the medical profession has developed a tiny bit of "guts."

A profession that lacks self-respect and self-appreciation gets just about what it calls for, i. e., no respect or appreciation from others. That's why the medical profession has no social, commercial, or political status worth mentioning.

Much of the danger that confronts the medical man is due to evil conditions within the profession itself. We doctors are egotists by cultivation, even though by nature we may not be unlike other folks. "Self-centered" is our "middle name." The exigencies of our vocation and our surroundings are responsible for this.

The average doctor has little brotherly feeling, and less consideration, for his coworkers and doesn't care two whoops what happens to the profession so long as his own toes are not trodden upon. Doctors have about as much *esprit de corps* as a gathering of cats on a tin roof. Their yowls and clawings and spittings are purely individualistic. Often, if the doctor is a great "professor," he babbles to his younger brethren of ethics, professional dignity and brotherly love, until he "gets his'n," and then he tells the profession to "go hang" and fathers various schemes to impoverish it, under the camouflage of the interests of "humanity" or of the "dear public."

The profession has had the "dear public" and "love of humanity" stuff ladled out to it and has swallowed it for so long that it now hasn't the courage to confess that the practice of medicine is a vocation—in which one should be privileged to fight the battle of life on even terms with other men in other vocations, giving the public the best he can and getting the best reward he can.

The doctor is "jollied" by the public—and by the medical "tin gods"—just as some people have jollied the poor, by promising them mansions in the skies and assuring them that it is easier for a

camel to go through the eye of a needle than for a rich man to enter the Kingdom of Heaven.

The poor man has taken "a tumble to himself." He has seen through the lie—he has discovered that, whatever difficulty the rich man may have in getting by St. Peter, he can go through some pretty small holes here on earth—without even "humping" himself—and can "get by" with almost anything. But has the doctor taken a "tumble?" He has—not.

Aggregations of doctors daily are getting together on the "welfare of humanity" and scientific stuff; they even will pull together in petty medical politics, but whoever heard of a body of medical men getting together and sticking together on any principle which promises to be of material benefit to the profession? How afraid we are of violating moss-grown traditions and offending certain ethical "bunk artists" and mawkish sentimentalists!

The doctor is the lowliest organism of which biology takes cognizance. Even the humblest nomad has the instinct of self-preservation. If the profession took half as much interest in self-protection as it does in enacting laws which oppress reputable medical men, and repress quackery little if at all, it might help some. The medical practice laws of our various states may add to the gaiety of nations, but the spectacle of an experienced practitioner moving to another state, being compelled to submit to an examination for a license, is one for gods and men: "A mad world, my masters."

To see ourselves as some others see us:

A Senator from New York State, during the hearing on the Davenport-Donahue Compulsory Health Insurance Bill, March 19, 1919, said:

"You doctors are the dearest people on earth and we love every hair in your head, as individuals, but as a class you are pitiable! You spend your time and money and energy organizing and maintaining scientific societies for the advancement of science and the betterment of mankind and you don't know the first thing about the law of self-preservation. Go home and organize!"

We always have fancied that we had plenty of medical organizations, from county societies and local academies of medicine to our great national association, to which we have paid tithes without a murmur. But what have they done for us? Chiefly parcelled out offices and furnished

"kitchens" for the private practices of the "willing workers" and distinguished "We have with us tonight" from out of town, who happen to be solid with the program committee. I recall one of these gentry who came a thousand miles to teach us how to cauterize a hemorrhoid! And how edifying the discussions! On one occasion, two well-known surgeons consumed twenty minutes each in telling us how grateful we should be for the obvious compilation with which we had been favored by the eminent Dr. Fizz. Then there are those wonderful "original" papers, to which the author (sic) contributes nothing but his name!

The nearest approach to doing something for the general professional weal by our national association was to block the recent attempt of a "hand-picked" president and "ethical" exemplar (sic) from the east, to foist compulsory health insurance upon the profession. Did the "hand-pickers" really want to repudiate the aforesaid "beauty bright," did they smell revolution in the air—or have some folks really begun to see the light? I wonder.

What shall We Do to Be Saved? Possibly it is too late to do much, but it's worth trying, for, if the profession does not wake up, the practice of medicine as an independent vocation soon will be a thing of the past. Heaven help science and the "dear public" both, when that evil day comes!

Here are some of the things that we should do:

1. Swat compulsory health insurance whenever and wherever it raises its venomous head.

2. Swat appropriations for such schemes as the proposed \$15,000,000 group of state hospitals and laboratories for Illinois. Don't let "special pleaders," i. e., job holders, job seekers and men who are ambitious for personal glory at the expense of the profession, fool you.

3. Swat that lovely scheme to induce the U. S. Government to assume charge of all the venereal practice in America. If the Government ever should assume control, and showed the same degree of intelligence and efficiency as in the recent war, heaven help the country!

4. Swat the scheme for a big appropriation by the Government for "advancement of medical science." It does not require more than one guess to determine who would "run the show" and

spend the money. (Still, I "dunno." Two factions are after it.) Government control would mean medical "gang" control. The "advancement of medical science" sometimes masks much self-seeking and unholy medico-political ambition.

5. Swat the scheme for a medical cabinet officer—swat it twice. It would mean more "gang" stuff.

6. Swat, and swat hard, every medical man who accepts without pay, state, municipal and government jobs. They can be swatted easily enough. "Blacklist" them and cut off their "referred work" and watch them take to the "tall timber." Also, fire them from our medical societies. A certain State Representative speaking of doctors recently said: "Hell! We can get all them fellers we want, for nothin'."

7. Establish some sort of a salary and free standard for public and corporation service, and make our society members live up to it—the profession should not be content with crumbs from the public and big business tables. In brief, show a little of the *esprit de corps* of the hod carriers' unions. Incidentally, let the doctor stand by the doctor—less knocking and more boosting of the profession, for the profession and by the profession.

8. Cease wearing that mawkish, hypocritical camouflage of the "dear public" and admit that medicine is a vocation, the practitioners of which are as much entitled to a fair show in the struggle for existence as are those of any other. Less "dear public" and more "dear doctor" is in order. If we must go on in the old way, then let us demand consistency on the part of the "dear public." (Imagine how your landlord, grocer, butcher, shoemaker, *et al.*—to say nothing of the tax gatherers—would howl at this!) The medical profession always has, and always will, do more than its share of charity work, but it is high time it ceased doing the other fellow's.

The doctor should demand a fair chance in the battle of life. It may be a generous world, but all the same, if the skies ever should rain soup, the business man would be handed a bowl—the doctor a two-tined fork.

The dear public demands so much of us and so little of the quack, that it is a wonder that so few medical men depart from the straight and

narrow path—the more especially as certain medical men in high places “put over” such raw stuff.

9. Babble less of ethics, that bogey man devised by the monopolistic medical “Wiseheimers” to frighten the medical babies, and devote less attention to medical politics and more to the “garden” variety. Votes, votes and more votes—these are the only arguments that your legislator will listen to, except—well, something of which the quack and the patent medicine man, and some other people seem to have plenty—when legislation adverse to them is in prospect. A highly cultured member of the Illinois state legislature once remarked: “If youse guys wanta put anything troo, ye gotto kiss it troo.”

We need more medical men in politics—of the kind who will be loyal to the profession. And let us so conduct ourselves that entering politics does not spell professional ruin for the doctor.

10. Organize a national federation of new societies, the principal business of which shall be to battle for the best interests of the rank and file of the profession. An association of 50,000 with dues of five dollars per year, devoted to the publication of propaganda with a punch and to practical politics instead of to God know what, might help some. Let any respectable, legally licensed practitioner be eligible to membership. Why call it a “union”? Here’s where camouflage is of practical value. I could put my finger on several associations which are run by and for the few at the expense of the many, under the cloak of “scientific advancement.” Well, let’s have a great association labeled “scientific,” which shall be run for the social, economic, and political advancement of the many.

A competitor of existing medical organizations? Oh, no; the new one would not do the things the old ones have done and would do the things the old ones have left undone. Incidentally, if any of the old organizations should construe the new movement as an attack upon them, or as an attempt to organize competition, so much the worse for them. The new association can do a hundred things for the benefit of the profession without touching anything which the old ones ever did. At best, they have “fallen down.” *“If this is treason, make the most of it,” and if what I have said be professionally selfish, make the most of that also.*

CATHARSIS FOLLOWING ABDOMINAL OPERATIONS*

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OTTUMWA, IOWA

The proper management of the bowels following laparotomy was so thoroughly discussed from almost every angle some years ago that it would seem superfluous to introduce the subject again. Notwithstanding the attention given to this subject there is still a difference in the practice of physicians and some benefit may come from a consideration of it on this occasion.

The general practice of clearing the alimentary canal of all fecal matter prior to operation on the abdominal viscera gives almost universal satisfaction. It is advisable to use such means as will cause little irritation such as castor oil or sulphate of magnesia. They should be given the afternoon before and be followed by an enema. Solid food is withheld in the meantime. In emergencies or acute inflammatory conditions involving the alimentary tract no cathartic is permissible, the enema alone being warranted.

The proper management following laparotomy is probably more important than that prior to operation. This discussion will be limited to cases normal or otherwise, in which there is no mechanical interference with bowel movements. Organic ileus will be dismissed with the statement that it calls for the only treatment that can benefit, that is relief of the obstruction.

Some years ago the almost universal practice was to begin very early after laparotomy with calomel and active cathartics, surgeons generally being of the opinion that the recovery of the patient depended on an early evacuation of the bowels. In truth what appeared to be the cause of the good results was due to the favorable condition for recovery inherent in the patient and not the result of the active efforts to move the bowels; while the evils attributed to delayed movements were the result of the patient’s condition and not due to failure of bowel movements.

Post-operative conditions such as vomiting, distention, elevation of temperature and restlessness are at times made an excuse for energetic efforts to move the bowels, while these symptoms together with intestinal stasis are all the result of pathologic physiology resulting from the disease.

*Read before Tri-State Medical Society, Rockford, 1919.

They disappear as the insults to the tissues are repaired. If the bowels have been properly emptied prior to the operation, there can be little reason for attributing unsatisfactory conditions to the contents of the alimentary canal. There is great danger of confounding cause and effect.

Normal peristalsis of the gastro-intestinal tract is the result of impulses sent through the autonomic or vegetative nervous system. Probably certain glandular products or hormones are also a factor but their intimate connection with the autonomic activities make it difficult to separate the two. The autonomic nervous system is considered as consisting of three segments, the cranial, sympathetic and sacral. The cranial and sacral occupy the upper and lower segments, respectively. They tend to promote active peristalsis, while the sympathetic occupying the central segment tends to restrain these activities.

Gastro-intestinal stasis may result from either spastic or paralytic ileus. Acute spastic ileus is more commonly the result of irritation above the diaphragm, being often observed in pneumonia and diaphragmatic pleurisy. It is more commonly found in children and may lead to error in diagnosis. This has happened in pneumonia and basilar pleurisy in which the spasticity continued for several days during which time it was impossible to move the bowels. Paralytic ileus may result from disease as for instance peritonitis, or may be produced by trauma as in operation. In either case the mechanism is the same and is the result of injury to some of the abdominal viscera.

It has been established that strong emotions, peritoneal inflammation, severe pain, exposure and handling of the abdominal viscera all tend to inhibit the action of the cranial and sacral divisions of the autonomic system and at the same time to stimulate the sympathetic into excessive activity. The degree of inhibition and stimulation are governed by the susceptibility of the patient and by the extent of the trauma or injury sustained by the viscera. It has appeared to me that the inhibition was greater when the injury was inflicted on those organs supplied by the cranial division than when it fell on those in the lower abdomen supplied by the sacral division. This inhibition is present for a greater or less time following all abdominal operations as is evidenced by dilatation of the pupils, dry-

ness of the mouth, absence of digestive juices, inhibition of peristalsis of the gastro-intestinal tract and of the contractility of the bladder. At the same time and coincident with these, stimulation of the sympathetic closes the pylorus, contracts the vesical sphincter, stimulates the adrenals, accelerates the heart rate, etc. In other words, the normal balance between the activities of the two opposing divisions of the autonomic nervous system, is for the time being disturbed, the extent of the disturbance depending as stated above on the amount of trauma and the susceptibilities of the individual patient.

The treatment of intestinal stasis or ileus depends upon the form and its cause. The spastic condition prevents action of the bowels by constricting their lumen, and drugs given by the stomach tend to excite vomiting and put the patient in a much more uncomfortable and even serious condition. In like manner high or stimulating enemas fail as the spasticity usually involves the colon. Opium with atropine in sufficient doses will do more to quiet the hyperacting cranial and sacral autonomic nerves than any other treatment. In fact this with the withholding of food by the stomach is the only treatment. In most cases in due time, even under full doses of morphin, the spasm will relax and the bowels move freely without the aid of cathartics. The recovery of the patient will depend on the progress of the exciting cause of the spastic ileus and not on the failure of bowel movement.

In the treatment of the paralytic form of ileus prevention is of utmost importance. When due to peritonitis, prevention can be exercised only in so far as it is possible to prevent or relieve the peritonitis. On the other hand if due to the trauma of operation a great deal can be done to prevent the more serious forms. The frame of mind of the patient both before and after the operation plays no minor part. Dread of the operation and fear of the outcome following the operation are in themselves sufficient in susceptible individuals to bring about this condition. It should be the rule to have the patient go into the operating room in a confident frame of mind and to be assured afterwards, in every way, of the ultimate success of the operation.

Anesthetics differ widely in their power to block sensation and limit the assault on the nervous system. That anesthetic should be

chosen which in view of the requirements of the case, most limits post-operative trouble. Farther than this the subject of anesthetics will not be discussed. Paralytic ileus is a natural conservative action and should be so understood. The extent of the ileus depends upon the severity of the disease or the amount of trauma during the operation. If the disease, as for instance peritonitis, is severe the ileus is complete and will continue until nature regains control through proper functioning of the autonomic system. If not due to disease but to operation its extent will be proportionate to the trauma and exposure incident to the operation. What may seem of little consequence since they do not produce a reaction in an anesthetized patient may easily produce profound impressions on the central nervous system to be later manifested as paralytic ileus. Dull knives and scissors, unnecessary clamping of large masses of tissue, handling the viscera, dragging on the mesentery, exposure of the viscera to the air and so on all produce more or less reaction depending on the extent of the injury. The ileus resulting in this class of cases is conservative. It is nature's means of bringing about a condition most favorable to recovery. Great care should be exercised not to defeat nature but to assist her by correcting excessive and stimulating deficient action by means not harmful in themselves. The absence of glandular secretion and of gastro-intestinal peristalsis is not necessarily serious if not too long continued, especially are they not as serious as the results of violent efforts to force bowel movements.

In the average post-operative case complete rest will result in a day or two in the resumption of function by the autonomic nervous system. It will be evidenced by a return of the pupils to normal, return of salivary and gastro-intestinal secretion, lowered pulse rate and a sense of general improvement experienced by the patient. At this time a gentle laxative such as calomel followed by an enema will be all that is required.

Should reaction be delayed because of peritonitis or trauma, the same reasons are present for conservative action. Nature can be assisted much more successfully and safely by the calmarative efforts of proper doses of opiates which by lessening the transmission of harmful impulses aids the central nervous system in sooner re-

gaining control so that the cranio-sacral divisions of the autonomic nerves may resume normal action and the sympathetic be quieted. In due time the bowels may be easily moved by gentle means. Very active cathartics, especially if administered early, irritate the stomach and bowels and thus increase the evils which it is proposed to overcome. When necessary the stomach may be easily and safely emptied by the stomach tube. In like manner the colon may be emptied of gas by the rectal tube and if necessary small stimulating enemas.

Much attention has been given to the discovery of drugs or biochemicals which by a specific action on one or other of the divisions of the autonomic system could be useful in regulating their action. The results so far are limited. Pituitary extract appears to be a decided advance in the line of a stimulant to the cranio-sacral divisions and has been freely used in the condition under consideration. It should not be administered too early as results are much better when nature has partially recovered her equilibrium.

X-RAY MANIFESTATIONS OF DISEASES OF THE CHEST*

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I bring this subject before you, not for the purpose of presenting new material, but rather to recall to your minds some of the radiologic diagnostic points in chest examination. The laity have the misguided opinion that the x-ray will demonstrate any and all pathological conditions—they in many cases demand this form of examination, particularly in chest conditions. This is forcing many of us to add to our armamentarium an x-ray equipment, and with little or no training, we attempt to interpret screen and plate findings—little realizing that we are browsing in a field that has become so specialized and requiring such training and application as to soon demand specialization within itself. We now have divisions such as chest radiology, gastro-intestinal radiology, etc., with men devoting their entire time to such branches.

We have frequently had patients come to us who have been told that their radiograph re-

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vealed pulmonary tuberculosis. Our radiographs, accompanied by careful physical examination, clinical observation, and occasionally a subcutaneous tuberculin test, failed to confirm the diagnosis. What is the answer?

No untrained man would attempt to make Wassermann tests and treat his patients on the basis of his results. In our opinion, no more should the untrained man attempt to make radiologic diagnosis. Radiology is an even more exacting specialty than serology for it demands a foundation of physiology, pathology and anatomy, in addition to the technique of shadow interpretation.

To some of you my subject matter will be very familiar and I hope you will forgive me if my presentation seems didactic.

I bring for your consideration the subject of "X-ray Manifestations of Diseases of the Chest."

Tuberculosis is probably the most important and frequent affection of the lungs with which we have to deal. It is the disease which is so readily diagnosed and followed by the x-ray. We shall confine our attention chiefly to what Bunyan chose to term the "Captain of the Men of Death."

Barjon has summarized the values of radiology in pulmonary tuberculosis:

1. To detect latent tuberculosis, particularly the mediasternal type.
2. Early diagnosis of incipient tuberculosis.
3. Confirm clinical diagnosis differentiating pseudo tuberculosis.
4. Give exact topography of lesions.
5. Follow development.
6. Give information on complications.
7. Furnish indications for Forlanini—Murphy treatment.

The graphic appearance of a negative chest varies with:

1. Size and shape of chest.
2. Age of individual.
3. Previous pulmonary diseases.

X-ray appearance of lungs consists of:

1. Great mass of air vesicles which permit passage of ray.
2. Network of bronchi, blood vessels and lymphatics. These latter are responsible for markings on the plate and their variation gives indications of disease.

We are not so much concerned or puzzled in

the radiographic appearance of advanced chronic tuberculosis with positive clinical and stethoscopic signs. We are more interested in making a diagnosis in the latent cases where clinical and stethoscopic signs are wanting or in the incipient case which is clinically tuberculosis, but in which the stethoscopic signs are either absent or so doubtful as to make us uncertain on a positive diagnosis. It is in these cases particularly that the x-ray gives us assurance.

The latent forms present no chest symptoms and no physical or clinical signs referable to the chest. There is a loss of weight, strength, and appetite with no apparent cause.

The incipient and miliary type may present cough, shortness of breath, night sweats, etc., in addition, but the physical signs are indefinite. In the majority of these cases x-ray evidence is definite. We can graphically present fibrous cicatrices, cretaceous tubercles enclosed in calcareous coverings and caseous or calcareous glands.

Routinely we study these cases by screen and stereo plate observing shadows in apices, hili, interlobar fissures, costo-diaphragmatic sinuses or limited portion of lung.

Under the screen, we first observe the thorax as a whole. The thoracic cavity and heart are both usually modified in tuberculosis. There is usually a narrowing of the hemithorax and the ribs slant downward and outward with narrowing of the intercostal spaces. There is a diminution in the excursion of the ribs on respiration. Rarely, however, are these findings present early.

The small median heart, so-called "water drop heart," projecting very little to left or right of the median line, is characteristic of pulmonary phthisis. With no other finding, such a heart indicates a predisposition to tuberculosis. A large heart in a suspected case is to be interpreted favorably.

Next we observe the respiration for the changes are often valuable in an early diagnosis. Normally the right diaphragm is slightly higher than the left and they both rise and fall regularly through an equally extensive excursion. In incipient tuberculosis, careful examination and exact measurements often show early modification of excursion on the side affected. During expiration, the diaphragmatic domes may rise to the same level but on inspiration the excursion becomes unequal. The lowering of the diaphragm

is less on the diseased side. The inequality of diaphragmatic excursion has two theories: (1) Loss of elasticity of the lung due to infiltration and (2) a reflex inhibition. This sign is of value if it corresponds to a change in the hylus shadow or a diminution of the clearness of the apex on the same side.

Frequently we may find one of the costophrenic angles obliterated or on the left side, no clearing between the heart and diaphragm on inspiration, thus indicating pleuritic involvement.

We next observe the hylus shadows. Normally the hylus is crescent shaped, elongated and situated at the edge of the median shadow separated from it by a narrow clear band. The upper points are short, the lower extends into the lower one-third of the right lung. The left lower is covered by the cardiac shadow. It is distinguished clearly in the normal lung and always remains somewhat light. The shadows are always abnormal at an early stage of tuberculosis. In some cases, hylus infection precedes pulmonary involvement. This is the usual onset in children. The abnormal findings are increased opacity. The hylus becomes more visible and less homogeneous. The narrow band disappears. There is a central enlargement, an elongation of the points and a disappearance of the crescent shape.

These findings alone, however, are not diagnostic since many non-tuberculous conditions may produce them. They may follow any bronchial or peribronchial inflammation. In children, they follow pertussis, measles and grippe; in adults, affections of the mediastinum, esophagus or even stomach. These changes together with a suspicious diaphragm or apex are of diagnostic value. They are evident on screen examination, but detail and depth may be studied in stereo plate.

The apices normally are bright and light well on coughing or deep breathing. In early cases, we look for a loss of clearness or a unilateral shading. Instead of a lighting, we may observe a "closing" or darkening of the apex on coughing. Apex findings are usually diagnostic. We must remember, however, that they may be due to such pathology as substernal thyroid, clavicular glands, old fractures about the shoulder girdle, aneurysm of the arch of the aorta, soft tissue tumors such as lipoma, old imperfectly resolved

upper lobar pneumonia, etc. The screen findings may be negative so the detail of the stereo plate is studied. The plate reveals finer detail shadows and half tones cast by disseminated tubercles and perivascular and peribronchial infiltration which are invisible under the screen.

The onset of tuberculosis is often in an interlobar fissure ("tuberculose sissurale"). We see a somewhat opaque obscure band transversely cutting the hemithorax in its entire width at the level of an interlobe. There is often given no stethoscopic evidence, nor the temperature or serious functional troubles which ordinarily accompany suppurative interlobar pleurisy, and it is diagnosed by the x-ray only.

In the periphery, we search for disseminated tubercles and Dunham's fans, as the shadows cast by perivascular and peribronchial infiltration are termed. These are rarely visible under the screen but are readily demonstrated on the plate. For convenience, we divide the chest into outer, middle and inner thirds and upper, middle and lower thirds. We have learned that normally the outer and upper thirds of the chest should show none of the finer structure. In tuberculosis, we are early able to see detail of structure within these areas.

In spite of everything however the early diagnosis of pulmonary tuberculosis remains one of the most difficult clinical problems. The x-ray is merely an added form of examination but more exact. This form of examination should never be neglected any more than you would neglect the stethoscope. It must be remembered, however, that a negative x-ray examination does not mean a normal lung. Positive evidence alone is of absolute value in medicine. A radioscopic examination by disclosing slight modifications of clearness by localizing these modifications where clinical examination has suspected them, will give the clinician either certainty or much greater assurance.

Two other forms of tuberculosis are included in this group,—miliary and infant tuberculosis, because they give often no stethoscopic signs and diagnosis is often difficult. The miliary form is often the beginning of confirmed tuberculosis. The patient may be treated and diagnosed as bronchitis. The symptoms sometimes resemble gastric disturbance or typhoid. Typhoid pneumonia is often diagnosed. Thoracic symptoms may be absent and appear only at a later stage.

instantaneous radiographs will establish the diagnosis showing granulations. Infant tuberculosis is readily established by x-ray. It is shown ordinarily to begin as a small focus in lower lobe (R) then attacks the glands of hilus, later the tracheo bronchial glands and the apices subsequent to these gland lesions.

In all forms of chronic or sub-acute pulmonary tuberculosis with the clinical diagnosis evident, radiology is used simply to (1) confirm diagnosis, (2) differentiate pseudo tuberculosis, (3) study development, (4) disclose complications, (5) furnish therapeutic indications (pneumo thorax).

The radiosopic appearance in these cases shows the widest variations as does the pathology. All manifestations from questionable shadows to absolute opacity or involvement of entire hemithorax or both pulmonary fields are seen. The most unexpected forms and localizations may be established. The stethoscopic signs may indicate severe involvement and the x-ray negate this and vice versa.

Abnormal shadows are seen most often to affect the apices and hilus in general. The shadows are scattered, varying in density and separated from one another by clearer spaces. It is a mottling. Tuberculosis develops through foci. In confirmed tuberculosis, abnormal shadows are found on both sides but usually predominating on the side first affected. In advanced cases the shadows reach the lower lobes and the apices become spotted with clear zones due to cavitation.

DISCUSSION

Dr. E. S. Blaine (Chicago): Obviously this paper belongs in another section, and I fear that in the Surgical Section a discussion on early pulmonary tuberculosis as it might be seen by the x-ray might not prove very popular among a group of surgeons such as we see here. However, as it has been presented, we find that facts have been put forth that are founded on experience. Not all people engaged in medical work agree to some of the conclusions. We still find men in medical diagnosis who say the x-ray isn't worth a darn in lung diseases. However, those who are engaged extensively in such work know otherwise, and it does seem strange that there are still men who enjoy good reputations who will make such a statement.

The question, as Dr. Gunning has given it, of a specialty, is probably to be taken with a little grain of salt. It is true that some of us must confine our efforts in order to get the maximum value of x-ray, whether it be in surgery or medicine, but we find that with a broader dissemination of knowledge, that

all of us are going to be x-ray experts. Witness the increasing number of men who are adding an x-ray apparatus—now we are getting them vest pocket size—to their office armamentarium. The fact that, as Dr. Gunning suggested, a case recently came to him diagnosed from the x-ray viewpoint as pulmonary tuberculosis, and he finds it entirely negative from the same viewpoint, shows us that x-ray is not a formula proposition. We can't let a certain thing equal A and another thing equal Y and say that X is the result. There is still need for brains in reading x-ray plates and screens.

The negative and positive findings of x-ray on tuberculosis will be positive in one man's hands and negative in the other, because of misinterpretation,—the early stage of such a pulmonary change looks different to you than it does to me perhaps.

The thing that I wish to bring out is, don't blame the x-ray; blame me if I am wrong, but not the x-ray. It is our fault if our conclusions are incorrect. Fortunately, a large service backed up by post mortem findings called forth a remark by a well-known pathologist whom all of you recognize as worth listening to. He said that it is surprising that when the post mortem conclusions are written down, how often the x-ray was the one that was not the incorrect one.

Dr. Gunning (Closing Discussion): My purpose in pointing out the specializing in x-ray work was not to demand specialists, but to call to your attention the fallacies of attempting to make radiologic diagnoses with absolutely no training.

DIAGNOSIS OF HEART LESIONS SIMPLIFIED.*

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CHICAGO.

The method in vogue for diagnosis of valvular diseases has, for many years, been rather crude and cumbersome. Autopsies have shown that many mistakes were made which added confusion to the subject. Postmortem studies are showing us that by approaching the question of diagnosis from the standpoint of the etiology, we are on much firmer ground and the diagnosis thereby much simplified.

The profession was a long time in realizing that the type of heart lesion in any given case cannot be recognized by the mere presence and type of heart murmur. We can, for instance, hear a regurgitant murmur in a dilated valve or in a stenosis. In fact, many murmurs do not mean valvular disease at all. Hence we see that it is necessary to accurately understand the pa-

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thology present in a patient in order to understand the diagnosis, give a prognosis and institute proper treatment.

There are some patients, whom we know will die in two years after a murmur appears. On the other hand, the writer has recently heard a valvular murmur in an old lady, 86 years of age, who declared that her physician discovered and mentioned this same murmur over 40 years ago.

This question of diagnosis and prognosis has become somewhat simplified and better understood, only since we learned to check up autopsy findings with the etiological infection.

In other words, knowing the cause which produced the heart lesion, we are now better able to diagnose the type of lesion, give a prognosis and begin correct treatment, than we ever were when we depended merely on signs and symptoms.

Autopsies show us that we can depend on any given infection to run "true to form" and always produce its particular type of lesion. The murmur that we hear under the circumstances may vary in different patients for reasons to be considered later, and so, is an unreliable sign on which to base a diagnosis.

It was the writer's good fortune to be permitted to study, under Cabot of Boston, some autopsy statistics recently compiled at the Massachusetts General Hospital.

Some of the findings are surprising in nature, but are based on 4,000 autopsies, and so must be considered fairly conclusive.

These records show, among other things, that a streptococcic infection of a heart-valve always produces the same type of lesion, namely, stenosis of more or less degree. The common streptococcic diseases, which can always be depended on to produce stenosis, are the following: Rheumatism, arthritis, chorea, scarlet fever, tonsillitis, etc. Not a single case of valvular lesion following any of these diseases was found postmortem that produced anything but stenosis of one or more valves.

The pneumococcus, also, seems to fall in this group as far as stenosis is concerned. Bacteriologists also have recently called attention to the close relation between the morphology of the pneumococcus and the streptococcus.

The type of murmur recorded in these cases varied considerably in the different patients, although all showed some degree of stenosis. In

about one-third of the cases, the mitral was the only valve affected. A number showed the aortic as the only valve diseased. The larger number, however, showed various combinations. It is interesting to note in this connection that tri-cuspid stenosis never exists alone. Although the systolic regurgitant murmur is the one we usually hear at the mitral valve, yet if the etiology is rheumatism, for example, we know that we have a stenosis present on the basis of these autopsy records.

As an example of the variation in the type of murmur, we may cite the fact that a stenosis can produce a pre-systolic murmur at the mitral in one patient and a systolic murmur in another. Or, it will produce a diastolic murmur at the aortic in one patient and a systolic in another.

This is explained by the fact that there are varying degrees of stenosis causing more or less obstruction to the flow; and varying degrees of destruction of the valve-segments, allowing more or less leakage which we call regurgitation. If the leakage is greater in proportion to the stenosis, the murmur is usually regurgitant in type and vice-versa.

In congenital stenosis, as well as in the acquired form there is more or less shortening of the valve-segments, leaving the orifice in an open rigid condition allowing leakage.

But we know, also, that actual dilatation of the orifice of a valve gives a leakage, whether the segments are damaged or not.

It is readily perceived how unreliable it is to try to diagnose the condition present in a heart case simply by the type of murmur. It is also seen that no matter whether we hear a pre-systolic murmur or a systolic at the mitral, we can say positively, that we are dealing with a stenosis of that valve, if we can connect the present lesion up with a preceding streptococcic infection. Hence the simplicity of this method of diagnosis.

Even though a regurgitant murmur is the one usually heard at the mitral in stenosis, it is possible to bring out a pre-systolic murmur in some cases by various tricks. The common one is to exercise the patient and then listen. Another one is to break a pearl of amyl-nitrite under the nose of the patient while auscultating, as suggested by Morrison. This pre-systolic murmur, by the way, is nothing like other murmurs. It is more

of a coarse vibration or rumble, even when natural, and is the one often overlooked.

Another disease causing a valve lesion is syphilis. Here again the infection always runs "true to form." Autopsies of the last ten years, checked up by finding the spirochetes in heart specimens, show that syphilis, when it involves the heart, never hits any but a certain valve, namely, the aortic. Furthermore, the lesion is always the same, namely, a true dilatation.

Therefore in every case of aortic regurgitation we hear, we should always think of syphilis and see that a Wassermann is done. Also we know that a lesion of any other valve cannot be syphilitic.

Given a positive Wassermann in an adult under 40, where we find a regurgitation at the aortic, and which happens to be the only valve affected, and who is without a history of some streptococcic infection, the diagnosis is certain to be heart-valve syphilis.

As an example of the preceding method, we will suppose that we have discovered a diastolic murmur at the aortic valve, together with the signs that go with it, namely, Quincke's capillary pulse, throbbing arteries, Corrigan's water-hammer pulse, etc. The ordinary diagnosis would be an aortic regurgitation. But this really tells us very little. Regurgitation is merely a symptom, an *act* of leakage that ceases at death. All we know is that we are dealing with some damage that allows leakage.

The question becomes, what is this damage, how was it produced and what is its prognosis?

If now, we can connect this lesion with a preceding rheumatism or some streptococcic infection, we can say positively that we are dealing with a case of stenosis, that the valve cusps are damaged so that they will not close and that the prognosis, compared to other causes of this condition, is good.

If, on the other hand, we can connect this leakage with a syphilitic infection, we can say equally as positively, that we are dealing with a true dilatation or stretching of the valve-orifice and that the prognosis is poor, even though we begin anti-syphilitic treatment.

The autopsy statistics above referred to suggest that, in looking for the etiology of a valvular

lesion, we may classify the cause under one of the following heads:

Streptococcic or rheumatic, responsible for 44% of cases.

Syphilitic, responsible for 12% of cases.

Hypertensive (including sclerotic and renal), responsible for 37% of cases.

Thyrototoxic or goitrous, responsible for 6% of cases. Congenital, responsible for 1% of cases.

Streptococcic types are usually seen in youth, syphilitic in middle life and the hypertensive types in advanced life.

Malignant or ulcerative endocarditis, which we occasionally see, is nearly always due to some virulent germ, often the pneumococcus, engrafted on an old sclerotic scar of some previous lesion.

The goitrous heart produces, sooner or later, some hypertrophy and dilatation. These two conditions, by the way, usually co-exist, although there is no positive way of distinguishing between them, ante-mortem.

The pulmonary valve is never infected after birth. But it may show a congenital lesion. It is stenosis when affected. Hence a murmur developing at the pulmonary valve long after birth is usually functional.

The hypertensive type includes those cases associated with long-continued high blood pressure from whatever cause, or with hardened arteries and where the valve orifice or segments are hardened, rigid or shortened. In this connection, however, we may note that at least one-third of all cases of arterio-sclerosis do not show high blood pressure. This condition is often seen in old people who are apparently healthy.

In determining blood pressure, the diastolic, which is the static or blood vessel pressure, is the more important. The systolic, which is the vessel pressure plus the heart pump pressure, may be influenced by outside agencies as, for instance, excitement or nervousness. Blood pressures should be taken several times under different conditions in order to strike an average.

While the subject of blood pressure is not thoroughly understood and conclusions not always reliable, it may be stated for our purpose that a diastolic pressure in an adult that is constantly above 100 is abnormal.

The most reliable sign of arterio-sclerosis is not high blood pressure, but the physical characteristics of the blood vessels themselves. If, on

palpation, we find the following conditions of the arteries: 1, Tortuosity; 2, Roughness; 3, Hardness, we may say that they are sclerotic, no matter what the blood pressure is. Such a condition is quite apt to indicate a corresponding condition of the heart muscle and valves.

On the other hand, a long continued high blood pressure from any cause will result in hypertrophy and dilatation of the heart muscle whether the arteries are hardened or not. Of course, hypertension may be associated with kidney disease. In the classification of heart lesions, quoted above, both the arterio-sclerotic and the renal types are included under the heading "hypertensive" since it is impossible to draw any hard and fast line between them.

On discovering a heart murmur not associated with syphilis or some infection, but associated with high blood pressure or arteriosclerosis, or both, we can say that the lesion is of the hypertensive type and that the prognosis is fair, depending on the conditions present.

A systolic murmur at the aortic valve, frequently heard in old men, is often transmitted downward and heard very well at the mitral valve. These cases are usually wrongly diagnosed as mitral regurgitation, but autopsy shows merely a dilated roughened aortic arch. If, therefore, we discover a murmur like this, in a patient who has arteriosclerosis and high blood pressure, and who is without a history of some infection, we can safely classify it as a hypertensive case. A loud second sound heard at the base may indicate: First, hypertension; second, dilated roughened arch.

The prognosis of these three etiological types may be averaged as follows: Streptococic, comparatively good; hypertensive, fair, depending on associated conditions; syphilitic, poor, most patients die within two years.

Still another point in the recognition of heart-valve lesions is the fact that functional murmurs are the commonest of all murmurs. (Cabot.) They are seen in most fevers and anemias. They are common in school children who play hard and are often seen in adults after exercise.

In any patient, therefore, we have first to determine whether a murmur is functional or not. They may be heard at any valve but are common-

est at the base and are loudest over the pulmonic area. They are always systolic in time.

If, besides this, there is no etiological history, and we do not find any of the following corroborating signs of valvular disease, namely, hypertrophy of the heart, irregularity, accentuation or doubling of the pulmonic second sound, then we may safely say that the murmur is functional in type. They may persist throughout life but often come and go, sometimes without apparent reason and sometimes under the influence of rest. A systolic murmur in the aortic area with nothing else present, signifies no valvular disease. A pre-systolic thrill, however, is always a sign of organic disease. All thrills produce loud murmurs.

Remembering that a murmur is so often functional it is necessary to look for corroborating evidence before we can say that organic disease exists. Even though we may get a history of some previous infection, if the murmur is the only sign present we should call it functional. A murmur is often present during and shortly after any severe fever or infection and then later disappears.

In looking for hypertrophy as corroborating evidence, it is well to remember that the actual apex of the heart is lower than the visible apex-beat.

Having determined, therefore, that an organic valve lesion is present, the next step is to determine its etiology, after which the pathological diagnosis can usually be made, by our knowledge of existing autopsy records, which show that certain etiological factors always produce certain lesions.

The hypertensive heart (including the arterio-sclerotic and renal types) usually results in hypertrophy and dilatation. Later, the stretching of the auricular-ventricular orifice allows leakage, which still further increases the work of the heart muscle.

The prognosis, in fact, of all heart lesions depends, not so much on the valve-lesion as on the physical condition of the heart muscle. This is shown by the condition known as compensation.

In streptococic mitral stenosis with good compensation, patients may live out their natural span of life.

SUMMARY AND CONCLUSIONS.

1. Many murmurs are functional.
2. We must find corroborating evidence before we can say positively that an organic lesion exists.
3. Regurgitation is not a lesion. It is an *act* which ceases at death. We should know the condition present in a case which allows it.
4. Autopsy statistics show, that every infection of a valve, runs "true to form" and produces its characteristic lesion.
5. Hence the diagnosis of the pathological condition present is simplified by merely determining the etiology that produced it.
6. Syphilis always produces dilatation, and never involves any but the aortic valve.
7. The streptococcus (rheumatism, arthritis, scarlet fever, chorea, tonsillitis, etc.), always produces stenosis.
8. Pulmonary valve disease is always stenotic and is congenital in origin.
9. A dilated roughened aortic arch of the hypertensive type is usually wrongly diagnosed as mitral regurgitation because the systolic murmur is projected backward to the mitral area.
10. No diagnosis of a valve lesion is complete unless we know the condition or infection that caused it.

DISCUSSION

Dr. Leon Bloch (Chicago): I think we owe a debt of gratitude to Dr. Weatherson for his very able presentation of the subject. I just want to emphasize a couple of points.

First of all, I think we ought to remember that diastolic murmur is due to aortic regurgitation. The organic murmur and the presystolic murmur are absolutely diagnostic; the others are not.

The second point I wish to speak about is the importance of cardiac symptoms. All the cardiac symptoms can be traceable to two or three disturbances. First the disturbance of stenosis. Now, most of the cardiac symptoms are traceable to that. We know a large number of murmurs are myocardial disturbances and with myocardial disturbances we undoubtedly get a stretching of the left ventricle; with that we get a relative regurgitation. That murmur is not a functional murmur, it is a regurgitant murmur but as the heart regains its normal condition, this murmur disappears. Another type that we get is by the disturbance of conductivity.

THE CERVICAL OR KRONIG CESAREAN SECTION.*

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CHICAGO.

The classic Cesarean section is giving such brilliant results in the hands of so many that a new method of extracting the child through the abdomen is not received with enthusiasm. Nevertheless, I wish to present for your consideration this evening the transperitoneal or the Kronig-Doderlein Cesarean section.

The technic of this operation is more difficult than the classical, but the final results are such that this objection is overruled. The abdomen and vulva are prepared in the usual manner. Just previous to operating, the bladder is catheterized, and the catheter is allowed to remain. The patient is then anesthetized, using ether or novocain.

The abdomen is entered by a midline incision extending from the pubis to within 1 or 2 centimeters of the umbilicus. The fascia over the left rectus muscle is cut near its insertion and the muscle retracted outward. The peritoneum is then cut, care being taken not to injure the bladder, which usually lies well within the abdominal cavity.

A large pack is placed in the abdomen walling off the lower uterine segment so the intestines do not come into view. This pack consists of a large thin rubber tube filled with a heavy gauze pack.

The lower uterine segment is in sight. The patient is placed in the Trendelenberg position. This causes the lower portion of the segment to come into better relation with the abdominal wound. The loose peritoneum, at the junction of the bladder with the uterus, is grasped in tissue forceps, about 1 to 2 centimeters from the bladder and cut with scissors transversely. It is carried down both sides of the uterine segment to a point just median to the broad ligament. Care should be exercised near the broad ligaments not to injure any veins, as troublesome hemorrhage results. The bladder is then stripped up from the lower uterine segment. This is easily accomplished as a rule by the gloved finger. If the patient has suffered from a previous cystitis or pelvic infection, some difficulty may be encountered. The bladder is lifted away from the uterus

*Read before the Chicago Medical Society, March, 1920.

to a point within 2 centimeters of the edge of the cervix.

The peritoneum on the uterus is then lifted up by blunt dissection, if possible, or by scissors. It is usually possible to dissect the peritoneum away for a distance of about 4 centimeters. Toward the sides, it is rather firmly adherent, but in the center, where the uterine incision comes, it is rather loosely adherent. The outline of this reflected peritoneum is semi-circular in shape. This is a departure from the original technic, which the members of the Chicago Lying-In staff have been using for the past three years. Beck recently reported that the same technic is being used at the Long Island College Hospital.

The bladder is lifted up and over the edge of the pubis and held there by a retractor. This exposes the uncovered uterine segment. In order to prevent soiling the abdominal cavity with liquor amnii, etc., a volsellum is fastened in the upper edge of the exposed portion of the uterus. This is firmly held upward by the assistant. By this maneuver the uterus is brought in contact with the abdominal incision, effectually closing off the cavity.

A median incision is then made in the cervix with a scalpel, starting at the lowest point. Care should be exercised that the scalpel does not go deeply and cut the child. The lower segment is rarely over a centimeter thick. At times, it is impossible to complete the incision with the scalpel, because the field is covered with blood. In this case, the incision is finished by using bandage scissors, guiding them by touch. The uterine incision should be about 12 centimeters long. The body of the uterus is not included in the incision unless the child is very large.

The left hand is passed into the wound and the fetal head is turned so that the face looks upward. Forceps are then applied to the sides of the head, the upper edge of the blades pointing toward the parietal bones. The right blade is put in place first. The head is then delivered slowly, the upper end of the uterine wound being used as a fulcrum. The delivery is usually accomplished easily. The edges of the uterine wound are gently pushed over the head in a manner similar to that used in delivering the head over the perineum. The mouth and nose are then cleared of mucus. The child frequently cries at this stage of delivery. The shoulders are then

delivered in the anterior posterior position. Care should be taken here, as rough handling will cause an extension of the uterine incision. The rest of the body usually comes out easily and readily. The cord is clamped and cut in the usual manner.

The lower end of the uterine incision is grasped by an Allis forceps, as there is a tendency for it to retract. One mil pituitrin is then injected subcutaneously, or into the uterine muscle, depending on the amount of bleeding. Generally, little bleeding is encountered after the delivery of the child. The placenta is allowed to present at the wound. It does this in the vast majority of the cases within 5 minutes. There is no need to hurry. The rapid and manual delivery of the placenta usually results in a great loss of blood, and many times in a greater loss of time in order to control the bleeding.

On two or three occasions I have had the incision extend. These mishaps occurred in my early cases, because I worked too fast and too roughly. The extension usually occurs laterally, either at the lower end of the opening or near its center. I have never seen or heard of the extension continuing down, so as to split the cervix completely.

On one occasion it was necessary to carry the incision upward into the body of the uterus because the child's head was too large. This was easily done by scissors, without removing the forceps.

After the placenta and membranes are delivered, the uterine incision is closed. We begin to close the wound at the lower end and sew upward. A single strand of No. 2 20-day chromic catgut is used. One knot is tied and the end left long. The first row takes in part of the muscle down to the endometrium. After reaching the upper end of the incision, the same strand is locked and carried downward completing the second row of sutures. This includes the rest of the musculature. The strand is tied to the end left at the beginning of the first row. Three knots are tied. Great care is used in approximating the wound, especially at the ends in order to prevent leakage. Beck recommends interrupted sutures. We have had no occasion to change our method as yet.

The bladder is then released from the retractor and lifted upward. The upper peritoneal flap is replaced. Occasionally we suture it to the uterus, but more often we do not. The bladder

peritoneum is then sutured in place above the loose upper peritoneal flap. No. 1 20-day chromic catgut is used and a running suture is placed at the beginning at the right side of the peritoneal wound. Care is taken not to catch the uterine muscle or to puncture a vein in order to prevent a hematoma forming beneath the peritoneum. These are troublesome and offer a fine opportunity for bacterial growth.

This completes the peritoneal toilet unless further work is contemplated. Removal of fibroids, resection of the tube, removal of a cystic ovary, sterilizing, etc., may be done, if conditions warrant.

The patient is then removed from the Trendelenberg position and the abdomen closed, layer by layer, paying particular attention to the lower end of the wound, on account of hernia.

The after care of these patients is equally as important as the operation. Especial attention should be paid to the bladder. *It must be emptied every six hours.* If not, there is great danger of separating the freshly formed adhesions with resulting hematoma.

Aside from this, the distension causes considerable pain. We catheterize every six hours if necessary, and give hexamethylene tetramine, gr. v q. i. d.

Usually we give $\frac{1}{4}$ gr. morphin a few hours after the operation. It is seldom necessary to give more than two doses. It is really surprising how promptly these patients recover. After the second day the casual observer is not able to tell them from the normal case. They are cheerful and practically free of gas pains. They move in bed without discomfort. After-pains are not noticed more frequently than in normal deliveries. I believe that most of this is due to the fact that:

1. The corporal musculature is not damaged.
2. No peritoneal adhesions tend to form.
3. The intestines are not handled or brought into view, and
4. The peritoneal cavity is not soiled with liquor amnii, etc.

The diet for these cases is simple. They are given all the water they want as soon as they are able to drink, regardless of vomiting. I have had no case vomit more than two or three times. Within twenty-four hours they are placed on a light and in forty-eight hours on a general diet.

In other words, treat them as a normal case, only begin after the first twenty-four hours. I give a dose of castor oil on the third day, instead of the second, as in a normal case.

The indications for this operation are those for the usual Cesarean section, with the following exceptions, placenta previa, tumors in the lower uterine segment and where the Poro Cesarean is indicated without reservation. In addition to the usual indications, this operation can be done and it has been done in cases where infection was present, or in which infection was strongly suspected. We thus avoid doing a craniotomy on a living child. In fact, Küstner claims it eliminates craniotomy altogether.

Baumen, Kronig, Küstner and other European operators are doing it in infected cases, but DeLee in a recent article stated "in frankly infected cases I still fear to perform abdominal delivery." Since writing that paper his fears have been realized. The patient, a large fat woman (280 lbs.) with a masculine pelvic outlet and a blood pressure of 204/138, had been in labor for 84 hours, without progress except effacement of the cervix, with 5 centimeters dilation. The head was not engaged. There was a marked vaginal discharge. She was Catholic, 36 years of age and a primipara. The transperitoneal Cesarean section was done. The patient developed peritonitis two days later. The abdominal wound was laid open and drains were put in, but the patient succumbed to the overwhelming toxemia in five days. The baby is living.

The only alternative in this case would probably have been a craniotomy on the living child. If this had been done would the woman have died of sepsis anyway?

Unknowingly, I operated on a woman who had sexual intercourse 24 hours previous. She developed an abscess in the cervical wound. This abscess ruptured through into the cervical canal and also burrowed beside the bladder to the lower edge of the abdominal wound. She ran a low temperature and rapid pulse throughout the first ten days. She had no pain in the abdomen and it was only on removing the stitches that the abscess was discovered. After drainage was established, she made a good recovery. The uterus was freely movable in the pelvis 12 weeks after operation.

Fifty-two cases have been operated on by the

staff at the Chicago Lying-In and Provident Hospitals. Twelve of these have been suspiciously and one frankly infected. One mother has been lost and one baby. The indications have included contracted pelves, abruptio placenta, ruptured uterine in the lower segment, and cystic ovary obstructing delivery. The history of the mother who died has been mentioned. The baby who died was undernourished, the offspring of a morphine habitue who had been taking 8 grains per day throughout pregnancy. This baby died five days after delivery. This death can not fairly be charged up against the operation. This gives a maternal mortality of less than 2 per cent. and no fetal mortality.

If these cases were added to those quoted by De Lee from eight other operators, we find two maternal deaths in 123 cases (1.6%) and no deaths among the infants. This includes work by twelve different operators. Surely the results, so far, speak highly for the cervical Cesarean section.

The advantages of this operation may be briefly listed:

1. The test of labor can be given without fear.
2. There is less shock to the patient, as the intestines and peritoneum are not handled.
3. Less bleeding.
4. Less chance for formation of abdominal adhesions.
5. Better control of infection.
6. Less risk to mother and baby.
7. Better after results.
8. Less chance for subsequent uterine rupture.
9. It avoids craniotomy on the living child.

Infection, if present, is usually confined under the peritoneum. It can burrow upward only a short distance owing to the firm attachment of the peritoneum. It can burrow downward between the bladder and cervix, through the cervix, or beside the bladder toward the pubic.

If not treated, the abscess will point in the skin near the abdominal wound, or into the cervical canal. The treatment is easy. It can be reached extra-peritoneally through the abdomen, through the cervix, or by dissecting the bladder from the cervix through an anterior colpotomy.

Upon examining the uterus 6 to 10 weeks after operation, it is surprising how little scar tissue is left, and in consequence how little damage has been done to the uterus. Usually it is possible to feel a short ($\frac{3}{4}$ inch) narrow scar in the cervix.

The uterus is freely movable and not painful. No pain is referred to the bladder. No abdominal distress is noticed and backache is not present.

Regarding subsequent rupture of the uterus, two cases are on record. In both, the body of the uterus was included in the incision. These, then, were not true to form. Two cases have been re-operated on by one member of the Chicago Lying-In Hospital staff. In neither was the former scar seen. The fear of rupture in a subsequent labor is thus happily lessened. As much cannot be said of the classical Cesarean section.

The only disadvantage I see to this operation is the technical difficulty. It requires considerable more skill than the classical and a more detail knowledge of the anatomy of the pregnant woman. This is an advantage in diagnosis.

POINTS IN INFANT FEEDING OF VALUE TO THE GENERAL PRACTITIONER.*†

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The last ten years have seen a revolution in our conception of infant feeding. The search for a definite anatomic pathologic basis for nutritional disturbance has been abandoned, the hope of finding specific micro-organisms for specific clinical pictures has been vain, and now pediatricians are generally agreed that if milk is boiled most of the disturbance has its origin in improper proportions of the food elements to each other, i. e., in improper ratios of protein, fat, carbohydrate, and salts in the milk mixture. The first attempt to put such an idea into effect was by the percentage system, an effort to make cow's milk mixtures resemble breast milk in chemical composition. Many observers, however, dissatisfied with the practical results of this method, have by their studies done much to clarify and crystallize our knowledge.

It is not my purpose to go into the great subject of infant feeding, but to point out some of the important advances in physiology and metabolism that have resulted from these studies. The application of these new conclusions has been so satisfactory that the underlying principles must be sound, and if sound for children why not also for adults? The writer has often wondered if the

*From the Michael Reese, Sarah Morris Hospital for Children and the Northwestern University Medical School.

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general practitioner is aware or interested in some of the ideas which children's men have so carefully been studying.

First, as to the time-honored subject of infantile diarrhea. If infectious diarrhea has been prevented by the use of pure or boiled milk, we believe that a great number of diarrheal cases is due to the improper use of carbohydrate—of ordinary sugar. The history of the development of this idea is fascinating. When the world was making heroic efforts to discover some bacterial cause, Finkelstein and his assistants observed a great number of diarrheal cases developing in their institution. By chance they learned that an error in their diet kitchen had included ten per cent. instead of five per cent. carbohydrate in the milk mixtures. Could this be the cause of the trouble? Working with intense enthusiasm they learned that the addition of sugar to the baby's diet in some cases did result in diarrhea. In some, however, it did not. Further observations showed that diarrhea resulted when sugar was added to the mixtures which were rich in the whey elements of the milk, i. e., the mineral matter. Thus a full milk mixture, a skimmed milk mixture, a buttermilk mixture, or whey itself would be far more laxative if sugar were added than one-third milk or one-half milk with sugar, the latter containing much less of the whey elements. The explanation is not absolutely complete but the experiments made paint a pretty clear picture.

If carbohydrate is exposed to the organisms which are normal to the intestinal tract fermentation occurs with the formation of volatile fatty acids as acetic and butyric. These acids if introduced experimentally into the intestinal tract of animals are irritating and provocative of diarrhea. Chemical examination of the stool in diarrheal cases shows a great increase in the volatile fatty acid content and much greater than the content in spoiled milk. Thus the actual cause of the disturbance lies within the intestine itself and is due to no external factor other than the food mixture.

Now if diarrhea is due as a rule to fermentation of carbohydrate enhanced by the presence of concentrated whey salts with the resulting formation of volatile fatty acids, the treatment must be relatively simple. If carbohydrate ferments it must be cut down or given in non-fermentable form. If whey salts aid in this fermentation

their concentration must be reduced. If we can give something to alkalinize the intestine we have still another therapeutic agent. Protein serves the latter purpose, the casein curd of the milk being ideal. In contrast to carbohydrate when attacked by intestinal bacteria, protein putrefies and gives rise to alkaline products. It calls forth large amounts of alkaline intestinal juice for its digestion, and lastly casein, the protein of milk, contains much of the base, calcium, which itself is a powerful factor in overcoming intestinal acidity.

A knowledge of this simple physiology is the basis of the albumin milk of Finkelstein and Meyer, namely high protein with low carbohydrate and whey. However, results with this new mixture were at first quite perplexing. While it worked magic in the intestinal tract and while acid green watery diarrheal stools became hard, constipated, and soapy, nevertheless, many babies died in collapse. New investigations soon furnished the explanation. While the mixture was ideally planned for the intestinal tract it did not contain sufficient carbohydrate to cover the needs of the baby's body and the children died from lack of sugar. It was then learned that to thrive a child must have a minimum of three per cent. carbohydrate, and furthermore with the high protein and low whey in albumin milk this three per cent. can be given without endangering the intestinal tract.

Such a scheme can be applied to the diarrheas of older children. To reduce the whey cut out the milk temporarily. To reduce the carbohydrate and to change it to the less fermenting type give small quantities of cereal such as cornstarch or farina. To cover the absolutely essential demand for mineral matter give small quantities of strained vegetable such as spinach. To supply high protein give cottage cheese, casein, or even a little scraped meat. For fluid give hot tea. It is self evident that with a fermenting mass in the small intestine cathartics and intestinal antiseptics as ordinarily given are of little service. A single dose may do no harm by emptying the intestinal tract but this being accomplished further catharsis is useless. Indeed by the additional irritation, it may do more harm than good and far more babies are lost than saved by the routine use of physics. What is needed is not further irritation but a change in the reaction of the intestinal contents.

Such principles, on the other hand, we may apply to constipation. When a baby is constipated by a high protein, low carbohydrate diet, the reduction of the protein and the addition of sugar by setting up intestinal fermentation may correct the trouble.

This is one of the striking advances made in the realm of pediatrics, and this new conception has created very satisfactory methods of treatment. Can the men in general practice make use of these ideas? Is it possible that the application of these principles to adults might accomplish just as significant results as to children?

Another observation of far reaching importance is that of the parenteral infections. A child gets an infection outside of the enteral tract (parenteral) i. e. a pharyngitis, otitis or cystitis. Diarrhea results. Some years ago most of the profession and all of the laity considered that the child had an upset stomach with resulting fever. Now we look at the picture in another way. We believe that the cough or cold was primary and that due to the toxins or the changed character of the digestive juices an intestinal fermentation has resulted and now carbohydrate which was previously being digested and assimilated is fermenting and causing the diarrhea. Such diarrheas are probably more common than the primary fermentations themselves.

What shall be our treatment? If the cold is not severe and the intestinal condition not bad, no food treatment whatsoever is required for as soon as the parenteral infection has run its course the factor provoking the diarrhea has gone and the intestine will right itself. If on the other hand the secondary diarrhea is severe then it requires treatment and this treatment must be on the basis of the primary disturbance just alluded to.

Can this idea be applied to adults? Just as babies have been purged, starved, and treated for dietary conditions and indigestion when the cause of the whole disturbance might have been found in an infection of the bladder or the middle ear, and just as failure to recognize this fact led the pediatrician by making frequent and unnecessary changes in the diet often to change a mild secondary diarrhea to a really severe nutritional disturbance is it possible that the same mistake is being made in the treatment of adults? This is a question that the general practitioner himself must answer.

Lastly just a few words as to mineral metabolism. We have learned in a very superficial way to trace the course of some of the salts through the body. Calcium leaves through the stool; sodium and potassium through the urine. Suppose we give a simple salt like calcium chloride. The calcium makes certain chemical combinations in the intestine. Chlorine cannot leave as such in the urine and so combines usually with sodium. Thus in giving calcium chloride we are dragging sodium from the body. This is just a simple conception but one is at once impressed that in giving any combination of minerals we may be producing effects upon the organism far more complicated and of far greater significance than we possibly have realized.

It would be interesting to know if the general practitioner has as yet applied some of these principles to his adult patients and if so how successful he has been.

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AN ANALYSIS OF A NUMBER OF CASES OF WAR NEUROSES

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The history of the neuroses in the late war is well known. How at first, their real significance not being recognized, they were looked upon as new diseases produced by the unusual type of warfare; how they had associated with them in one euphonious and comprehensive term of diagnostic errors (shell shock), cases of psychoses, epilepsy and organic nervous disease. How gradually they were recognized in their true light of functional nervous disorders, differing in no wise from our old friends hysteria, psychasthenia, neurasthenia, and anxiety neuroses, except in the manner of their production and variations of coloring and tempo.

Although the number of cases of war neuroses that I have had occasion to observe has, in the light of the experience of others, been rather small, it seemed profitable to me to attempt a brief analysis of some of the phases having a clinical bearing upon the problem.

Of several hundred cases which I observed in Base Hospitals in France, copies of about 350 records were available. From these 200 of the

more detailed ones were selected to determine the relative frequency of some of the factors. My general impressions were formed, of course, from all the cases I had seen. From the numerical group has been excluded cases of emotional instability, timorousness, hospital neuroses occurring as an aftermath of an illness or wound, the phobic reactions of gassed patients and constitutional neuroses, and those not directly related to the war.

Heredity as a factor played but a small part and the incidence of neuropathic taint constituted little over four per cent. By neuropathic taint I mean the presence, in direct ancestry, of insanity, mental deficiency or the existence of a state in which one or more of the conditions of hysteria, anxieties, phobias, doubts or impulses were present.

The percentage is small and probably corresponds to that which would be found in the civil neuroses.

A constitutional condition, in which the individual had been easily upset, embarrassed, excitable, impressionable and hypersensitive, was found in a much larger group of cases (23 per cent.). Rather consistently, all of these characteristics were present in the same patient. Frequently these patients had been over scrupulous. In all of them the symptoms had been a matter of distress at times, and frequently a discomfort. Phobias were found in eleven per cent. of cases. They usually consisted of fear of lightning, thunder, fire, high places, in some open spaces, and in a very few, of loss of consciousness or insanity.

Previous attacks of neuroses occurred in five per cent. of cases, a high percentage and perhaps accidental to the group studied. The attacks were usually of psychasthenia or neurasthenia. Once, a history of fixed ideas was obtained, and in three a history of somnambulism was determined. Mental deficiency, except when combined with defects other than intellectual, did not seem to play a great role. It is to be noted that here intellectual defect alone was rarely seen and when mental deficiency was found (one per cent.) emotional and nervous instability and moral imbecility coexisted.

Inadaptability to civil situations, including

truancy, vagabondism, frequent change of occupation, lack of consistency in efforts, occurred more frequently (ten per cent.). It can readily be seen how such a condition tends to produce early dissatisfaction with the privations and frequent drudgery of war. Stuttering and ties were each only observed once.

The neuroses occurred not only under shell fire but at any time; when inducted into service, at the training camp in the U. S., or overseas, at the battle front or immediately back of it. Three per cent. occurred prior to exposure to the firing line. Forty-three per cent. followed shell fire, 36 per cent. after concussion, that is, as described by the soldier. As a matter of fact only 22 per cent. gave a history of loss of consciousness and of these a large number probably did not differentiate a confused state from unconsciousness. It is certain from the observation of by-standers that the history obtained relative to concussion is unreliable. Eight per cent. developed after having been relieved and sent to the rear. Nine per cent. in Base Hospitals consequent to exhaustion and over exertion. Just as a clear differentiation must be made between the physical symptoms of fear and terror, and a neurosis, so must one separate fatigue which is a recoverable physical condition from a neurosis developing consequent to it.

Conscious dissatisfaction with their situation was found in 2.5 per cent. This often was due to a realization of inadequacy under existing conditions, a recognition of ability to give better service in other capacities and a realization of the futility of efforts to change the condition under military organization.

A definite history of fatigue and hunger was obtained in 30.5 per cent. of cases. Both probably occurred in a greater percentage of cases but were frequently masked by other symptoms which occupied the patient's attention to a greater extent. Fatigue and hunger are important factors, not only because they prepare the ground for an ensuing neurosis, by breaking down the defensive reactions but also in that when the patient is more sensitive and impressionable, the natural physical consequences of fatigue, are misinterpreted by him, as evidence of an illness and give rise to apprehension and fear.

As frequently as is fear seen in some form or other in the neuroses of civil life, so does it manifest itself in the war neuroses. Fear is a defensive reaction common to all individuals. It is diminished by familiarity with the cause of the fear. It is natural that sooner or later the fear consequent to the initial experience under fire often and rapidly disappears. The direction and probably destination of large shells are gauged and then no longer create any great apprehension. Fifty per cent. of the cases admitted considerable fear under shell fire. In practically all of these cases the fear was greater than that experienced by men suffering wounds. Seven per cent. experienced fear under the shell fire immediately preceding the onset of their neurosis, whereas on former occasions fear had not been manifest under similar fire.

Fear is not only present under fire nor is it always the fear of injury or death that is present.

Anticipatory fear was present in 29 per cent. of cases in contrast to the three per cent. of cases of neuroses occurring before exposure to shell fire. This consisted of, in greatest numbers, fear of injury and fear of the patient going to pieces or losing his mind. Under fire fear of incompetency, of being unable to stand horrific sights, of possibility of loss of consciousness, of being confused, of cowardice, and fear of suffocation in a gas mask were often noted. After the neuroses had developed fear of death, the fears of incompetency, cowardice, being thought yellow and of insanity were noted. Definite fears were found in 33 per cent. of the cases. These were more common in the anxiety hysterics but occurred in the anxiety states following the disappearance of the symptoms of a conversion hysteria as well. The fear of return to duty was found in 13 per cent., of permanent injury in eight per cent. and of insanity in seven.

Fear of loss of consciousness, of future inadequacy, fear of being thought "yellow" were likewise often found.

The effect resulting from the fear of a disease of insanity not only produces mental symptoms, of lack of concentration, loss of memory, emotional instability, etc., because of preoccupation, but may frequently lead to a belief that the symptoms indicate the presence of such a disease or

insanity. As in the neuroses of civil life, a fear of heart failure, or of loss of consciousness, may be interpreted as heart disease and be accompanied by feeling of weakness, of suffocation, unsteadiness, etc., so were such fears interpreted in the war neuroses. In my opinion the element of fear in the picture of these neuroses has not been sufficiently emphasized.

Concussion was the immediate precipitating cause of the neuroses in 31 per cent. of cases, according to the soldier's statement. Ten per cent. followed gassing. Burial occurred in eight per cent. of cases. In the remainder, with the exception of the three per cent. of anticipatory neuroses, no history of a precipitating accident could be ascertained other than fatigue, which played a large part.

The symptoms of the neuroses could be divided into those of the reactions of fear and fatigue, the symptoms of the intermediate period, or the period prior to the onset of the actual neurosis, the symptoms consequent to the immediate precipitating accident, and the symptoms of the developed neurosis.

The symptoms of fear and horror are well known. Emotional phenomena, such as tears, tremors, tachycardia, tachypnea, sweating, micturition, cries, rushing about and states of hebetude and confusion were common. At times a state of increased activity and excitement was seen. Tremor was one of the most common physical consequences of fear and could be observed among many soldiers who, after the temporary fear subsided, could "carry on" indefinitely.

A history of tremor during the state of fear was obtainable in 50 per cent. of cases. A feeling of weakness in eleven per cent., a state of bewilderment in twelve per cent., and states of excitement and running away in but seven cases each were found.

The physical reactions to a state of fear are not pathological. They vary in different individuals as to type and intensity. Only when they are long continued, or exaggerated, do they become pathological.

In the intermediate period the symptoms indicative of the preparation of a soil fertile for the production of a neurosis were numerous.

They were marked by increased fatigability, by a more marked emotional effect relative to the fatigue, hypersensitiveness to the discomforts of trench life, irritability, a feeling of tension, with "jumpiness," sleeplessness, nightmares and hypnagogic hallucinations. The normal fears and apprehension which had disappeared were displaced by other fears, intensified and illogical. Fears of death, of injury, of cowardice, with intense self reproach, etc., were added. At this point the desire to escape the situation was crystallized. The consummation of the desire awaited but the direct precipitating cause.

Such a cause may be physical, as burial, concussion, gassing, etc., or psychical, as horrible sights, reactions to unusually severe bombardments or extra hazardous situations.

The symptoms following the immediate precipitating accident varied as to the cause, but certain symptoms seemed rather common to all accidents. Unconsciousness occurred in 41 per cent. of the cases according to the soldier's statement. Following concussion or burial a stuporous state was common. It occurred in 81 per cent. of the cases giving a history of unconsciousness. It was frequently confused with unconsciousness and was differentiated by the fact that a number of impressions occurring during this period were recalled, whereas in the former a complete and irreparable antero-retrograde amnesia developed. Headache occurred in 29 per cent. of cases; weakness in 20 per cent., a confusional state in 16 per cent. During such a state the soldier attempted to rush about, resisted attempts to carry him and exhibited signs of great horror. Tremor was more or less constant immediately following the accident. Emotional instability occurred eleven times. Vertigo and nausea not infrequently were present.

The symptoms of the neuroses themselves did not differ in the cases of psychasthenia and neurasthenia, from the civil types.

The symptoms of the conversion hysterias were as manifold and varied as were described by Charcot. Paralyzes, tics, tremors, convulsions, choreiform movements, astasia abasia, staso-basophobia, habit limping, pains, analgesias, bent backs, contractures, deafness, mutism, disorders of the viscera, psychical disorders and other disorders too numerous to mention abounded.

Despite their similarity to civil symptoms, however, certain symptoms were found in the war hysterias which were due to the influences of war experience. Very often when the stigmata, such as paralysis, aphonia, etc., were removed, a residue would be left which would resemble some of the symptoms of the anxiety states. Of these symptoms battle dreams were prominent, occurring in 36 per cent. of all the cases. Here invariably was found the subconscious expression of the wish to escape duty by death or injury. Retrospection and morbid review of their experiences were found in the hysterias and anxiety states alike in 15 per cent. of cases.

The tremors which were so commonly found in both types of neuroses require further study. In the hysterias it was evident that they differed not only in respect to rapidity and extent, the coarse, slow tremors occurring two-thirds as frequently as the rapid fine ones, but in the effect they produced. I am convinced that, in many cases, especially those exhibiting the generalized fine tremors, we were dealing with a continuous fear reaction which is not at all common to hysteria with its split off consciousness. Such cases showed not only the presence of hysterical stigmata, but evidence other than the tremors, of reactions of apprehension and fear, in jumpiness, sweating and tachycardia. It impresses me that some of the tremors I have seen may have been due to a process foreign to the psychic phenomena of hysteria and anxiety states alike.

Hysterical stigmata, such as gross tremors, marked weakness and ataxia, were not uncommon in cases of anxiety neuroses or states. It may, therefore, be stated that admixtures of the two states were common and that, in addition, at least in the cases of hysteria, phenomena referable to fear reaction seemingly having been carried over from the fright of the precipitating accident, occurred.

Obviously if the pathogenesis of the war neuroses lies in a conflict between an unconscious wish to avoid duty with its ensuing dangers and discomforts, and a sense of honor and patriotism, the rational treatment of these neuroses must lie in education. It should consist of an attempt at rationalization and production in the patient of a realization that it is far more profitable to

face the world and its problems, well, than to avoid them, sick. In short, it would consist of a remodelling of a character.

Unfortunately, this ideal could not be obtained in the military treatment of these states coming under my observation. Although a partial rationalization was always attempted, it must be admitted that in the main it was but the symptoms which were removed.

In the treatment of these only two types need be mentioned. The fears were treated by methods similar to those employed successfully in the treatment of the phobias of civil life. The explanation of the mechanism of fear with a clear differentiation of fear and its symptoms, from disease, followed by the strong insistence of the truth that if one avoids the things he fears, the fear increases, while if he meets them—whatever may be his feelings, they disappear, were the re-educational principles employed.

The most dramatic so-called cures occurred, of course, in the cases of stigmata of hysteria, such as paralyses, blindness, etc. Concerning these there is one illuminating fact: they all had been successfully treated by various methods for generations. The water of Lourdes cured them, the Christian Scientists cured them and various shrines cured them. They have been, in civil practice, cured by electricity, by baths, by hypnotism and psychoanalysis. In the war they were cured by hypnotism, anesthetics, electricity, psychoanalysis and reeducation. In other words, many methods were used, but it seems to me that there was but one means whereby the stigmata disappeared.

Whatever role suggestion may have in the pathogenesis of the stigmata of hysteria, it is evident to me that whatever method was used to treat them it was suggestion which produced their disappearance. If, after a careful examination, a correct diagnosis was made, and the patient had faith in his physician, it was necessary only to convince him that he had a curable disease, that the physician would cure him and that this particular method was the one to accomplish that end. Whatever technic was employed, whatever atmosphere was created, whatever mechanism was invoked, suggestion did the work.

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VASOTOMY; INDICATIONS; DESCRIPTION OF TECHNIC; POSTOPERATIVE TREATMENT*

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Infections of the seminal vesicles are caused by several varieties of organisms, the most frequent offender being the gonococcus. In over 75 per cent of the cases in which the gonococcus invades the male urethra, it travels back of the cut-off muscle into the posterior urethra. In most of these cases the seminal vesicles, as well as the prostate gland become involved.

This is not strange; in fact, it is well nigh inevitable when one considers the anatomical relationship of the parts. The ejaculatory ducts which penetrate the prostate open on the floor of the posterior urethra on either side of the utricle and sometimes into it.

The openings of these ducts as well as the openings of the prostatic ducts and of the urethral crypts offer shelter to the invading organisms along the urine swept urethra. And so, having become established within the ejaculatory ducts, their progress along the ducts to the seminal vesicles is readily accomplished.

The acutely inflamed vesicles present a number of symptoms which are merged with those of the acutely inflamed prostate, such as, sensation of fullness and pain in the rectum, frequent and imperative urination and a feeling of inability to empty the bladder. Direct symptomatic evidence of vesicle involvement distinct from the symptoms of prostatitis and posterior urethritis is not always available. Sometimes, however, distinct vesicle symptoms are noticed, as frequent and sometimes painful nocturnal emissions which in rare instances may be blood stained, increase of the urethral discharge following nocturnal emissions, and pain inguinal, sacral or along the spermatic cord on one or both sides.

Often there are no symptoms directly referable to the vesicles, but vesiculitis may be suspected in those cases in which the discharge persists for an unusually long time or in which there are

*Read before the joint meeting of Chicago Medical and Chicago Urological Societies, April 14, 1920.
The illustrations in this article are taken from an article by the authors in "Chicago Surgical Clinics," April, 1919.

remissions alternating with periods of increased discharge. Palpation of the vesicles per rectum may clear up the diagnosis at once by disclosing large tender vesicles. Often they are not distended or tender, but the expressed secretion may show pus or gonococci.

In the subacute and chronic cases the symptoms are varied. There may be recurring exacerbations of the acute discharge following intercourse or nocturnal emissions, the discharge usually appearing within forty-eight hours. Anomalies of ejaculation are common, such as premature, delayed or painful ejaculation, or ejaculation may be followed by a dull pain or aching in the vesicles and along the cord into the scrotum. Following in the wake of the disturbances of ejaculation may be various grades of atonic impotence.

Of the nearby complications of vesiculitis, the commonest is epididymitis which may occur at any stage of the vesiculitis. It is merely an extension of the process in the vesicle along the vas deferens. There is usually a partial or complete inflammatory obstruction of the ejaculatory ducts and overdistention or pressure may cause the infected vesicular contents to be forced down the vas deferens to the epididymis. Lifting and other exertion, straining at stool, instrumentation and vigorous stripping of the vesicle may be the immediate cause of this back pressure. This explains the frequent recurrence of epididymitis after epididymotomy in those cases in which the vesicular infection is ignored.

Over fifteen years ago Belfield called attention to the importance of injecting the vas and vesicle at the time of incision of the infective epididymis.

Due to the fact that the vesicles are directly behind the trigone of the bladder, their involvement commonly causes the persistence of urinary frequency and other forms of dysuria. The upper third of the vesicles being directly adjacent to the lower ends of the ureters it is not uncommon for the swollen vesicles to press upon the ureters or by extension of the inflammation to the perivesicular tissues to affect the periureteral tissues, and thereby cause partial obstruction of the ureters giving rise to symptoms which direct attention to the ureters and kidneys. In such cases in which there are sometimes no other

symptoms one may easily overlook the vesicles as being the real offenders.

Various sensations of irritation or pain may be felt in the perineum, in the inguinal region, in the back usually at the level of the upper border of the sacrum but some times extending as high as the kidneys, and in the hip extending some times to the thigh. One must not overlook the fact that the vesicle, while perhaps not so

PLATE I



- (a) Injecting Novocain about the cord just below external ring.
 (b) Injecting Novocain into skin along the line to be incised.

commonly as the tonsils or teeth, is one of the common causes of the so-called focal infections which give rise to such manifestations as arthritis, neuritis, myalgia, loss of weight and strength, and other disturbances including various neurasthenic symptoms.

Moreover, the fact that the infection in the vesicles may be latent giving rise to practically no symptoms, may be the cause of future disaster. A man with such a latent infection may

in good faith marry, thinking that he is well. Shortly after, when the young wife becomes infected the tragedy is at hand with its full measure of social and physical trouble. When we realize the far reaching effects of infected

the treatment of the acute anterior cases. Unfortunately, a large proportion of the fresh cases are not treated early or fail to take advantage of well directed treatment at this time. It is well known that in spite of good care and attention a fairly large percentage of the cases of anterior gonorrheal urethritis spread into the posterior urethra.

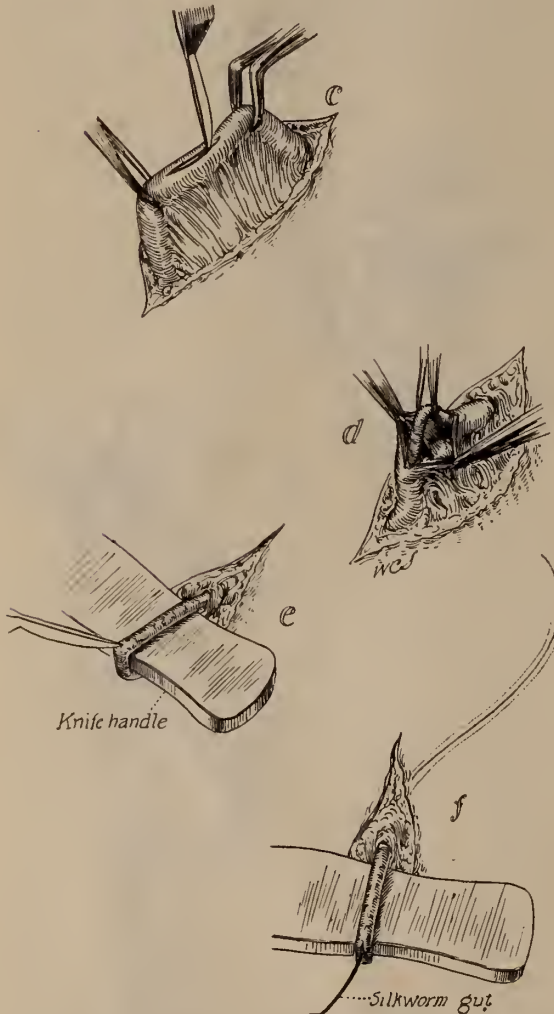
After the infection has reached the posterior urethra the vesicles are usually involved. It then becomes our problem to diagnose and treat them. As the symptoms are not always definite the chief reliance in making a diagnosis is usually dependent on the physical examination. The vesicles are found to be enlarged and tender and their expressed secretion contains pus with or without gonococci. In the acute cases the vesicles are seldom found alone involved and in the older cases also one usually finds an associated prostatitis, infected urethral glands, urethral granulations, or a stricture.

The treatment of vesiculitis depends on the stage in which we find it. In the acute stage the treatment is usually expectant aided by rest and local heat in the form of hot perineal packs, hot rectal douches and sitz-baths. Later, an effort should be made to establish drainage by means of massage through the rectum. A small percentage of the cases will respond to this form of treatment. The largest group of cases will persist in spite of massage even though it is carried out conscientiously for a long period of time. The cases which do not heal spontaneously and do not respond to massage form a large army and something further must be done to permanently cure them.

The means at our disposal consist of operative treatment in the form of vasotomy with the injection of collargol or some other antiseptic into the vesicles, vesiculotomy or vesiculectomy.

The majority of cases will respond to the simplest operative procedure—the vasotomy. This is especially applicable to the more recent cases and to those older cases in which there has not been too marked a change in the vesicle itself. In many long existing cases of vesiculitis there have occurred marked changes in the vesicle as perivesiculitis, thickening of the vesicle wall with rigidity and loss of normal elasticity, and in rare instances, parts of the tortuous tubule have become walled off from the rest by the inflam-

PLATE II



- (c) After incising the skin the vas deferens is picked up and held by two modified towel clips.
- (d) The sheaths are dissected from the vas and the denuded vas picked up with a tissue forceps.
- (e) The sheaths are pushed away from the under surface of the vas and a director slipped between them and the vas. A small longitudinal nick is made penetrating to the lumen.
- (f) A strand of silkworm gut is passed into the lumen of the vas to determine its patency.

seminal vesicles the question confronts us—what is the best plan to pursue?

First, we must endeavor to prevent the gonococci from reaching the posterior urethra and therefrom to the seminal vesicles. This must be done by ever increasing care and vigilance in

matory changes making those parts inaccessible to the injected antiseptic.

In these last named classes of cases the vasotomy is not so likely to remove all the symptoms and recourse must be sought in the more radical procedures of vesiculotomy and vesiculectomy. It must, of course, be borne in mind that the existing vesiculitis is not always, or not even frequently the sole cause of the patient's symptoms.

Strictures, infected urethral follicles, granular urethritis and prostatitis, any one or a number of which may be present, should also be treated and, if practicable, removed before the vasotomy is attempted. If the symptoms referable to the infected vesicles are urgent or if it is evident that the vesiculitis is preventing the other portions of the infected tract from responding to treatment, it is advisable to perform the vasotomy first and treat the associated conditions later. Many of the failures of vasotomy to complete a cure have not been because of the failure of the operation to clean up the infected vesicle, but because the surgeon had failed to recognize and treat the associated condition.

Even in some of the cases with thickening and perivesiculitis which are most unfavorable for vasotomy, we have reached the desired result by first doing a vasotomy followed by massage for a period of time. In many of these cases massage alone failed to make any impression on the vesicles but after the vasotomy they have responded. We do not feel that the major procedures, vesiculotomy and vesiculectomy, are often indicated unless a vasotomy with appropriate follow-up treatment has been tried and found wanting.

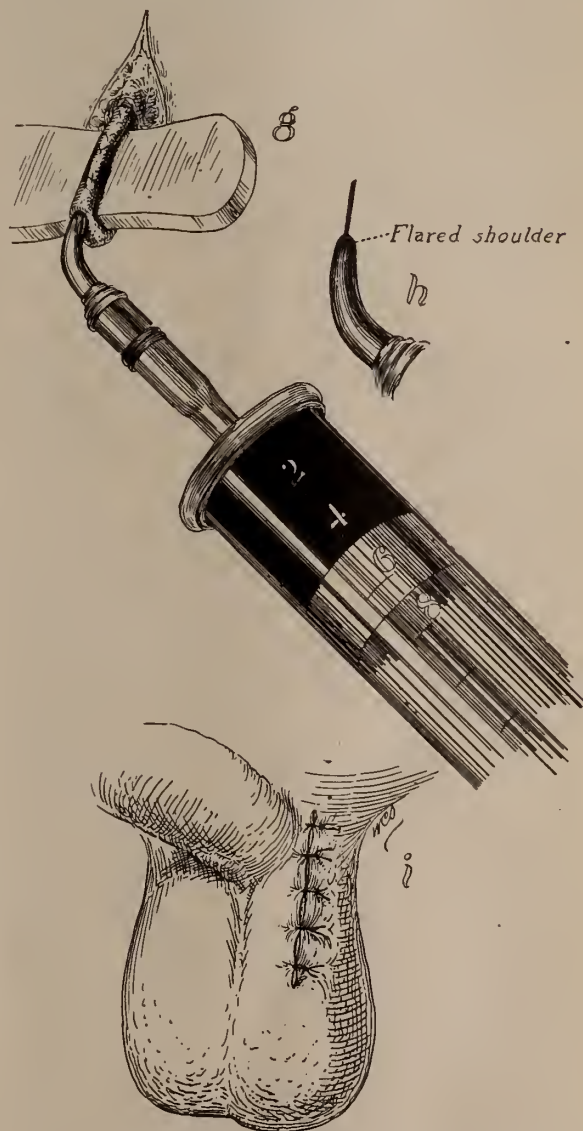
In following this procedure we feel that the patient's future welfare is best conserved, for vasotomy does not sterilize, while vesiculotomy and vesiculectomy frequently do. If by conservative measures we can retain the patient's fertility, we should by all means do so.

In those cases of epididymitis in which epididymotomy is indicated we must realize that the operation does nothing for the patient but relieve his pain and drain the epididymis unless we go farther and do a vasotomy at the same time. The combined operations will relieve the epididymitis, prevent recurrences, and at the same time, take an important step toward clear-

ing up the entire genital tract by attacking the disease in its most impregnable stronghold, the seminal vesicle.

Belfield, who first described vasotomy, has re-

PLATE III



- (g and h) A Ricord Syringe with a blunted curved dental needle is used for injecting the collargol solution. From 5 to 30 c.c. of a freshly prepared 3 to 5% solution of collargol are injected into each vesicle.
- (i) After waiting a moment to see if any of the collargol leaks back, the vas is dropped back into the scrotum and the wound is closed.

cently advised doing it earlier, even in the acute cases, thus shortening the course of the disease and attaining the desired end more readily. Our recent experience has proven this latter point to be of great value.

Before the patient is discharged he should be thoroughly examined to determine if he is cured. The criteria of a cure are as follows: There must be no subjective symptoms, strictures must be eliminated, infected glands along the urethra must be attended to, granulation along the urethra, and especially on or about the verumontanum must be treated through the urethroscope, the urine and expressed secretions from the prostate and vesicles must be free from pus and gonococci, and lastly, one or more ejaculated specimens of semen should be examined and found free from pus and gonococci.

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DISCUSSION.

Dr. Victor D. Lespinasse: I will limit my discussion to the technic and not to the indications. Vasotomy is one of those operations which you might say is all technic. It is a very small opening, and the epithelial lining of the vas is easily traumatized and peeled off, and therefore one is liable to have destruction and ulceration in healing.

The technic, as outlined here, is a modification of the so-called vasotomy. Personally, I like to do vas puncture in preference to a vasostomy. I do the vas puncture in two ways. If the patient has a relatively large vas, with relaxed scrotum, I try to do a vas puncture without cutting the skin, about one time out of three, and you can inject the vesicle in that way. It is a simpler procedure. With this technic it is not safe to use collargol, as you cannot be sure of entering the lumen of the vas. Consequently, if you test your puncture and inject a little collargol around the vas you will have trouble. So we must use some other bactericidal substance, and one that will not destroy tissue. I use the gonococcus serum and fill the vesicle with that. Usually, I add a little fresh blood to the gonococcus serum to make up the complement, so that you will have a complete bacteriolytic change. Where I dissect the vas, I expose it in practically the same way as the picture that has been shown, but a cut in the vas is not made. I simply take the needle and introduce it into the lumen of the vas. You can tell when you enter the lumen of the vas by a sense of loss of resistance, and if there is any question about it, I withhold the injection, and then make my cut; the technic is the same as that given. The argument has been made against vas puncture that it will destroy the epithelium; that you will peel it off, and that you are not sure of getting into the lumen with it as you are by opening the vas and putting a blunt needle in. That may be true to a certain extent, but with puncture of the vas I have had much less trouble personally with backward infiltration and infiltration in the scrotum than I had when I opened the vas freely, and consequently left a free access for the collargol into the tissues of the scrotum.

Recently, we have been trying to get at the vesicle from the other end of the tract, following up some work that was started by Lewis and taken up by other men, and we can succeed once in a while in getting into the ejaculatory duct and filling the vesicle through the ejaculatory duct. What will become of that, I do not know. Up to date we cannot report very much about it. It is a highly technical procedure, and one cannot be sure when he starts that he is going to be successful in catheterizing the ducts. Sometimes you get into the colliculus; there is never a certainty however of getting into the ducts. I do not know in what percentage of cases we are enabled to get into the ducts, but I should say in less than one-half of the cases, because on account of the anatomy they open into the colliculus, and not on the free surface of the vera, and that type of case is not amenable to catheterization.

Dr. J. S. Eisenstaedt: Just a word or two in regard to the technic of the operation as described by Dr. Herbst. The use of the broad shouldered needle is a distinct advantage in preventing possible return of the injecting fluid into the epididymis. Those of us who see many cases of seminal vesiculitis have interesting things coming up from time to time. Frequently these cases have been mistaken for almost any type of pathology in the abdomen. We have recently seen a marked case of pyuria which one would assume offhand came from some infection high up in the urinary tract; from the kidney. The cystoscope revealed trigonal cystitis limited to one-half of the trigone. Rectal examination, however, disclosed seminal vesiculitis, and after proper therapy directed toward the seminal vesiculitis, the urine became absolutely clear. These cases are not at all unusual. The literature is full of cases of seminal vesiculitis which have been mistaken for other pathologic conditions, such as gall-bladder disease, appendicitis, all types of lesions referable to the upper urinary tract. Cases have been reported in the French literature in which a diagnosis of malaria has been made, and even meningitis has been diagnosed when the actual condition was seminal vesiculitis.

Dr. Herbst mentioned the preliminary use of massage in seminal vesiculitis. Sometimes it is necessary to carry this measure over a protracted period in order to get any beneficial results. My experience in that direction has been that often in men of average size very seldom are we able to properly massage the seminal vesicles, to strip them properly with the finger. For several years I have made use of the vesicle stripper as designed and recommended by Dr. Schmidt, and have obtained much better results.

Dr. Charles M. McKenna: I would like to bring out one point in regard to vasotomy. In doing vasotomy we should remember that the patient has been suffering from chronic disease for some time, and I think it is very important for us to put the vesicles in the best possible shape before we do the injection. The vesicle may have a thick wall; it may

contain a plug in the vesicle orifice, or the entire vesicle may have contents in it. It seems to me, before vasotomy is done, early massage should be resorted to. Even after the massage is done, say two or three times a week, the vesicle may be found to be full. In that way, the strength of the solution is reduced and the results are not what they should be.

I think Dr. Herbst brought out a most important point when he spoke about exposing the vas with a great deal of care. It has been my experience where the vas has not been properly denuded of its sheath that it is very easy to inject the fluid between the sheath and the vas. Hence, it is in my opinion most important to divide the sheath and expose the vas so the needle may be introduced directly into the lumen.

I should like to say here that I am absolutely opposed to what is known as the vas puncture, because I can not understand how the operator can absolutely be sure whether the needle is in the vas or between the vas and the sheath and many times the needle passes directly through the vas and rests between the sheath and the vas on the opposite side. In this way you can easily see that the fluid would never get into the lumen of the vas at all.

I have seen cases where the vas has been exposed and not properly put back in its anatomical position and anastomosis has taken place between the skin and the vas and the result has been an entirely obliterated vas.

Dr. William T. Belfield: From time immemorial physicians have been familiar with the end segments of the genital duct, urethra, and epididymis. Until about fifteen years ago very little was known about the intermediate parts; yet these intermediate parts, vesicles, ampullae, and vasa, have a mucous surface about equal to that of the urethra. Now we have made a beginning at least, in the anatomy, physiology, pathology, and treatment of these intermediate parts. We have made it chiefly through the injection of the vesicles through the vasa, and by taking x-ray pictures of the injected canals.

I want to point out a few things we have learned since this began, and point them out on the screen, without describing them particularly.

Here (showing slide) we have vesicles and vasa injected through an incision in the scrotum. When we see the shape and the arrangement of these canals, we can understand that we would not be apt to succeed in emptying these vesicles by massage. When we know that the contents of these vesicles in chronic vesiculitis are usually semisolid, inflammatory stuff, which will not come out of the ejaculatory ducts, we can understand why massage frequently fails to clean up chronic infections of the vesicles.

The vesicles have an automatic contraction. Modern text-books on urology state that the vesicles never contract except in ejaculation. That would be remarkable if true. All other sacs and tubes we know anything about, which are encircled by unstriped fiber, have peristalsis. In fact the contents of the normal

vesicles are automatically passed back into the bladder at times. Normal contents of the vesicles include nucleo-proteins, and a small amount of serum-albumin. Hence the urine will at times contain both nucleo-proteins and serum-albumin, derived not from the kidneys, but from the peristalsis of the seminal vesicles. It is possible that explains some of these mysterious cases of intermittent albuminuria; for the bladder is a catch-basin for the seminal as well as for the urinary ducts.

Phosphaturia is commonly regarded as always of renal origin. The fact is the contents of the vesicle containing a great deal of nucleo-protein are apt to make the urine slightly cloudy, which cloud disappears at once on the addition of an acid. We know that is the explanation because after filling these vesicles with any easily recognizable substance, like collargol or argyrol, we will see on the second or third day, if we have the patient urinate in three glasses, the first time the urine will be absolutely free from any black admixture. The next time the first two ounces in the first glass will be very black. The second glass will be very slightly tinged, and oftentimes, not always, in the third glass there will be again some black. We really should take account in examining the urine of the frequent admixture of the contents of the vesicles, whether normal or pathologic. Pus and blood have often been found in the urine as passed ordinarily, but the differential diagnosis shows that it comes from the vesicles.

The seminal vesicles may become distinct pus tubes.

Here is a seminal vesicle (indicating) distended with pus and encroaching upon the opposite side of the pelvis.

As to the technic, I think Dr. Herbst has described the form we should use until we become familiar with it; but the dissection described is really more extensive than is necessary. Holding the vas against the skin, incision of the skin to the vas and puncture answers the purposes of a more extensive dissection.

Dr. Herbst (closing): I think, generally speaking, the term vaso puncture, as applied, is a misnomer, because the size of the opening made into the vas in performing a technically correct vasotomy is not very much larger than that which is made by the introduction of a needle. Again, vaso puncture is far from being a safe procedure, because one can never be certain in using a pointed instrument that the point of the needle is not under the lining of the vas instead of in the lumen. Under these circumstances it can hardly be safe to use collargol when one attempts vaso puncture; and in our study of a large series of cases collargol solution has proved to be the most efficacious solution in the treatment of infected seminal vesicles by injection through the vas.

Replying to Doctor McKenna, I will say that in all chronic cases of seminal vesiculitis we practice preliminary massage before resorting to vasotomy.

LITHIASIS OF THE URINARY ORGANS*

IRVIN S. KOLL, B. S., M. D., F. A. C. S.

CHICAGO

Concretions of the urinary organs were first described by Hippocrates, who spoke of "pain in the lumbar region, characterized by radiation to the testes, and the presence of stones in the kidneys." The history of medicine vaguely records the first operation for removal of a renal calculus as having been done by a French surgeon, Mendon, in 1474. More accurate data are recorded by Riolan (1618-1649) on "Surgical Procedures for Renal Stone."

In 1870 there appeared a treatise by Rayer on the anatomy, gross pathology and symptomatology of urinary calculi, to which little has been added, but it was ten years later when Morris performed the first nephrotomy upon a healthy kidney, expecting to find a stone. One year later (1881) Dentu did a nephrolithotomy. There promptly ensued a world wide invasion of kidneys for the removal of concretions, and legion contributions to the literature are represented by such urologic surgeons as Albarran, Guyon, Kummel, Israel, Freyer, Kolischer and Schmidt.

The advent and perfection of cystoscopy and radiography have developed the diagnosis and indication for surgical interference almost to the point of precision.

Pathogenicity. Arbitrarily lithiasis can be divided into primary—uric or oxalic acid concretions, and secondary or phosphatic; admixture of these salts is, of course, of frequent occurrence.

Secondary phosphatic concretions occur as a result of inflammation and suppuration of the renal parenchyma, augmented by alkalization of the urine; the salts thus precipitated acting as a nucleus for the calculus.

Primary phosphatic concretions are the result of hyperalkalinity of the urine, the origin of which may be the ingestion of food containing a high percentage of calcium salts, or of various metabolic changes secondary to nutritional disturbances.

Uric and oxalic acid precipitation may be considered as being the result of the same conditions. It is well known that oxaluria results from an arrested nitrogenous combustion. Experimentally

oxalic acid can be converted into uric acid and urea and clinically uric acid and oxalic acid gravel have been noted to pass alternately from the same patient. Cystine and xanthin deposits have as their origin the same process.

In the normal urine there are between fifteen and twenty milligrams of oxalic acid secreted in twenty-four hours. This physiologic oxaluria in the form of calcium oxalate is augmented under the influence of an increased vegetable diet, particularly tomatoes, rhubarb, etc. It is not so much the ingestion of these substances as the digestive disturbances that produce the increase in the renal secretion of the oxalic acid. Several experimenters have shown that primary oxalic calculi are deposited in the canaliculi near the pelvis and secondary deposits in the parenchyma.

Etiology. No age seems to be exempt from urinary lithiasis, though it is more common between forty and fifty years. In some locations, particularly southern France, it seems to be almost endemic in children. Civiale reports 45 per cent, out of five thousand four hundred collected cases, and Gross 50 per cent. out of six thousand cases. It is slightly more common among men than women.

The geographic distribution is interesting. In Europe, according to Robin, the Anglo-Saxons show more of a predisposition than the Russians, Hollanders, Italians and Hungarians. In Asia it is common in India, Arabia and Persia, very rare in China and widespread in Egypt, due, no doubt, to the heavy content of salts in the waters of the Nile.

In the United States the cases are more frequent in the Mississippi Valley. Heredity does not seem to play any active part except insofar as the ancestral morbidity of the so-called urinary and arthritic diatheses may be concerned.

Impaired nutrition as a result of defective hygiene, the improper or over intake of food and insufficient elimination, undoubtedly play the most important roles as the causative factors in the formation of calculi.

The Formation of Calculi. The mechanism and formation of calculi have given rise to many theories.

Civiale says that "the mucosa of the urinary passages act as a colloidal and agglutinating mixture, expand and contract the acid particles

*Read before joint meeting of Chicago Medical and Chicago Urological Societies, April 14, 1920.

of the salts of which the fine particles of the concretions are principally formed."

Robin—"The adhesion of the crystals makes juxtaposition immediate by reciprocal contact."

Waldeyer thinks that the calculus forms around a microbial nucleus. The analyses of Ebstein and the experiments of Chantemesse refute this theory; which is also contradicted clinically.

Tuffier's experiments show that the primary urate and oxalate crystallization form in the interior of the uriniferous tubules independently of any renal infectious process. The excess of uric acid is distinctly toxic to the renal parenchyma. Under its influence the cells become edematous and desquamate. Meckel has described this as "lithogenous catarrh." These traumatized cells become detached, drop into the pelvis and, by their agglutination, form gravel or calculi.

Finally, traumatism must be taken into account as a factor in the etiology.

Chemical Composition of Calculi. The salts which compose calculi are numerous, the most common being uric acid and the urates, oxalates and phosphates. Of rarer occurrence are calcium carbonate, cystin, xanthin, salts of magnesia and sulphates.

Calculi of uric acid are the most common; their size is variable, but usually they are small, attaining the dimension of a pea; they rarely become irregular in contour, nor do they often fill the pelvis or calices. Their consistence is very hard. The general appearance is yellow to dark brown in color, surfaces smooth as if polished, often flattened. On section they show concentric striations accurately arranged.

As a rule the urate calculi are made up of a mixture of ammonium, potassium, sodium and calcium urates, often in addition uric acid, phosphates and oxalates are present. They are not so hard as the pure uric acid concretions. Their other gross physical appearances are, however, quite similar.

The salts of calcium and ammonium constitute the oxalate formations. They are rarely pure, but in combination with uric acid or the urates these calculi are the hardest of all, their surfaces rough, like coarse grains of sand, the color varying from a reddish-brown almost to black.

The phosphatic calculi are more often single in occurrence. Chemically they are formed from

the salts of calcium and magnesium. The double phosphates of ammonium and calcium have as their origin alkaline urine undergoing putrefaction. These formations are very soft and are easily crushed. Very often phosphatic salts invest calculi formed of other salts; they also are deposited as incrustations upon inflamed and ulcerated mucous membrane of the bladder and kidney-pelvis.

Calculi of xanthin are invariably mixed with uric acid, occasionally a pure xanthin concretion is found in the bladder. These calculi are very hard, of a greenish-gray appearance.

Cystin stones are very rare. In a comprehensive paper, Kretschmer reports only one hundred and six cases in the literature, two of which were his own. Cystin stones and cystinuria are of special interest on account of the condition running in families. The theory of cystin formation is disturbed metabolism of protein substances. The stones are always pure and of moderate hardness. They usually form in the bladder.

PATHOLOGIC ANATOMY

Location and Number of Calculi. Calculi can be classified physically into sand-particles, gravel and stones; clinically they are migratory, retained, fixed or encysted. They may be single or multiple, in any location, in one or both kidneys at the same time.

There is no limit to the size a single stone may attain; the shape may assume that of some fantastic form or be geometric in its outline. Those formed in the renal pelvis may be bifurcated or take the mold of the pelvis and calices.

The smallest stones, which may vary from the size of a millet seed to a lima bean, are variable in number. A small single stone may lodge at the uretero-pelvic junction and completely obliterate it. A number of small stones may form in the pelvis or urinary bladder and become faceted or articulated in the manner they are usually found in the gall-bladder.

Their location is not constant in the kidney, but the majority are either formed in or become lodged in one or more of the calices. This is of great clinical importance as they can be, and should be, removed through section of the pelvis. Those formations in the parenchyma nearer the cortex are of less frequency and can be ap-

proached only by cutting into the kidney substance.

Stones in the kidney can be mobile or fixed, the former, when they become migratory, pass into the ureter and thereby produce the acute, so-called renal colic, which is really an ureteral colic.

The occurrence of calculi simultaneously in both kidneys is now recognized to be more frequent than was formerly thought. The frequency, as reported by various genito-urinary surgeons, varies from 12 per cent. (Kuster) to 50 per cent. (Leguen).

The Kidney. The presence of a stone in the pelvis or one of the calices is accompanied by more or less pronounced morbid changes. However, these changes may not occur and following either the spontaneous expulsion or surgical removal, the renal tissue may be restored quite to the normal.

The walls of the pelvis may become thickened, due to tissue proliferation produced by the continued irritation.

Simple dilatation may accompany the presence of calculi in the pelvis or calices. This dilatation, in turn, may be the forerunner of retention, which, if aseptic, represents what is called calculous-hydronephrosis.

The presence of smaller stones in the parenchyma usually is not associated with any degenerative process, and more often than not the focus remains aseptic.

One can readily conceive that the presence of a stone in the pelvis invites bacterial invasion. This may occur through the blood stream or, as is more often the case, through the lymph channels, probably ascending from the intestinal tract.

We have then a septic kidney, which, in the beginning, is called clinically a pyelitis, but which the writer believes does not exist as a pathologic entity. At the outset it is a pyelonephritis, the more marked changes taking place in the pelvic mucous membrane. If the changes progress, the kidney is sooner or later converted into a purulent organ, with one or more abscesses which finally coalesce into a large pus sac or pyonephrosis.

Associated Pathology. A simple peri-nephritis always accompanies any suppurating renal processes. The fatty capsule may undergo simple softening and liquefaction, or may become

indurated and sclerotic. If the infection extends through the Bowman's capsule the fatty-bed suppurates and is transformed into a peri-nephritic abscess.

In unilateral renal calculus the opposite kidney takes on the functioning of both if infection destroys the secretory power of the calculous organ. Compensatory hypertrophy ensues. If the septic process is severe, a toxic nephritis, usually mild, may occur in the opposite kidney. This is manifested by slight albuminuria and a few casts. This always disappears following removal of the diseased kidney.

Ureteral Calculi. Without fear of exaggeration the writer claims that 95 per cent. of the calculi which pass from the kidney into the ureter pass into the bladder either spontaneously or with the aid of lubrication through the ureteral catheter.

If permanently lodged, they may attain a great size, usually obstruct the urinary flow and thus transform the kidney into either a hydro- or a pyonephrosis.

Of the 5 per cent. which do not pass, the lodgment more often occurs close to the ureterovesical orifice.

Cases have been reported where ureteral calculi have eroded through the wall of the ureter and become entirely extra-ureteral. These instances are rare.

Vesical Calculi. Vesical calculi vary as much in size and chemical composition as to those of the kidney. These can also be classified as primary and secondary. The former usually originate in the kidney as small concretions or gravel, descend into the bladder and there grow by deposit from the urine due to general metabolic disturbances. They are usually made up of uric acid, sodium urate or calcium oxalate.

Secondary vesical calculi develop in the infected bladder under the influence of the inflammatory processes which transform the urine into a strong, alkaline medium with a precipitation of phosphatic salts, usually of ammonia and magnesia. Bilharziosis and foreign bodies may be the nuclei of vesical concretions.

Stones of the bladder are mobile or fixed. The former may be temporarily held in a diverticulum or behind an enlarged median prostatic lobe, or fixed in these positions permanently until removed surgically.

Pathology. The bladder will tolerate a calculus of considerable size for a long time without becoming infected, after which the characteristic changes of a cystitis take place, with the tendency to the formation of discrete, mucosal excoriations or superficial ulcerations. Pericystitis, perivesical abscess and ascending renal infection constitute the associated pathology which may occur.

Urethral Calculi. Calculi of the urethra are nearly always located in the prostatic portion. They are not to be confounded with the concretions which originate within the prostate gland and which do not come within the scope of this discussion.

Calculi of the prostatic portion of the urethra may be free in a pocket of inflammatory origin; lie within a true urethral diverticulum, or may be considered to be urethro-vesical, lying part of the time within the cavity of the bladder, part of the time in the urethra, then again slipping back into the bladder. Diverticulæ of the urethra are rare. A concretion on its passage through the urethra may become lodged in the enlarged pocket of mucous membrane (valve of Guérin) within the glands at the level of the corona. The writer has seen one such case.

Symptoms. The general symptomatology of renal, urethral and vesical calculi are too well known to need detailed discussion, but there are some difficulties which will be briefly outlined.

Let us consider the symptoms of renal and ureteral stones under three groups: those due to 1, retention in the kidney; 2, due to migration, and 3, to ureteral obstruction.

Care must be taken not to be misled by the so-called reno-renal reflex in cases of retained kidney stones. This condition, though not occurring commonly, is of sufficient frequency to warrant our notice. The literature is replete with reports of all symptoms of pain present in the otherwise healthy kidney. There can be no question but that renal neuralgia or renalgia does exist; due note must be given to it.

The stumbling blocks in migrating ureteral stones are other acute colics, acute retro-cecal appendices with their tips resting on the ureter, showing even some microscopic blood in the urine; finally, and most important, the crises of the kinked ureter and tables. Many a patient has been subjected to lumbar section for suspected tone, only to subsequently give a positive Wasser-

mann and, upon further investigation, show other manifestations of spinal luca.

Diagnosis. Upon the Roentgen-ray the burden of responsibility rests in diagnosing kidney and ureteral stones. The modern technic of radiography is developed almost to the point of perfection, so that failure of detection by the skiagraph should be a rarity.

The causes of failure are incomplete purgation of patient, inadequate power of the Roentgen tube, or improper use of same.

Essential in the technic for good results are immobilization of the kidney and ureter by compression and limitation of the irradiating surfaces; instantaneous exposure, and the use of aluminum filters to eliminate the shadows of the soft tissues. This last point is now in general use at the Michael Reese Hospital and has proven of great value in detecting small concretions which otherwise would not have shown.

The shadowgraph catheter is a distinct adjunct in assisting in the localization of ureteral stones.

The best I can say for pyelography for this or any other purpose is that it gives brilliant opportunity for the publication of extensive articles and books that are of therapeutic interest, but upon careful scientific analysis are wholly devoid of any clinical value.

The great pitfall in drawing conclusions is the misinterpretation of shadows produced by other bodies than calculi in the kidney substance or pelvic or ureter. Calcified lymph nodes, pleboliths, enteroliths and gas accumulations in the intestinal tract many times make the diagnosis of stones in the urinary tract questionable.

Treatment of Renal and Ureteral Calculi. The latter can be quickly summed up. The writer quite agrees with the rather facetious statement of Kolischer, who states that "of the great number of physicians whom he has known to have had ureteral calculi he has yet to hear of one submitting to an operation." It is a serious mistake to cut down upon a stone that has passed into a ureter until ample time has been given for it to pass either spontaneously or with the assistance of a lubricant forced in through the ureteral catheter to the point of lodgement of the calculus. There are very few stones which do not pass thus aided, though the procedure may have to be tried many times. It is surprising at times

how large a stone may be passed. The permanent arrest usually is near the uretero-vesical opening, at which point it is a simple matter to force the stone into the bladder through a systotomy. It may at times be possible to get the stone into the bladder through the use of the operating cystoscope by either dilating the ureteral orifice or cutting one of its lips with a fine pair of scissors.

It should not be necessary to emphasize the fact that the majority of renal stones which are to be found in the pelvis or calices should be removed through pyelotomy and not through nephrotomy. To cut through the kidney substance for removal of a stone in the pelvis is distinctly obsolete and unsurgical. The author has shown in a previous communication that following an incision into the renal parenchyma there is a wide area of necrosis which is finally replaced by connective tissue with secondary contraction and typical scar formation.

The technic which the writer follows is that originally described by Kolischer. Great emphasis is laid upon avoiding the cutting of the muscles when incising for delivering the kidney. This can be done by cutting through the fascia of Petit's triangle and separating the muscle fibres. Preliminary undermining of the skin is essential to give more room in which to work. The skin incision is along the lower border of the twelfth rib.

After the kidney is delivered two sutures are placed on either side of the pelvic wall; these are used first as tension sutures and later to close the opening. The pelvis is incised between the two sutures, the interior is then explored with the finger and the stone or stones removed.* If the calculus is in one of the calices it is milked down into the pelvis. A large piece of fat from the perirenal pad is then brought over the incised pelvis, preferably without cutting the fat, which is tied by the two sutures originally placed. This is all that is necessary for closure.

If the stone is in the renal parenchyma, as small an incision as possible is made directly over the stone; after its removal a piece of fat is used to plug up the cavity and this is held in place by one or more sutures which are tied over the fat. Secondary hemorrhage is thus avoided and the process of healing is augmented. No drainage should be used.

It requires much more bravery at times to re-

place a kidney than to remove it. If there is any considerable amount of infection it is a waste of time beside the subjection of the patient to further suffering not to do a nephrectomy. If a calculus does not reform promptly, then the infection will soon spread and a pyonephrosis result. This point, however, may tax the best surgical judgment and a conservative procedure may be decided upon.

Treatment of Vesical Calculi. There is no surgical procedure that is fraught with more serious sequelae than litholapaxy. It has its limited indications, but is more properly controlled by contraindications. These latter are very large calculi, very hard calculi and infected bladders. Small bladder stones in the absence of a marked cystitis should be removed by crushing, with a proviso that the operator is experienced and skillful in the manipulating of the lithotrite; otherwise it is far better for the patient to have a suprapubic cystotomy.

31 North State street.

DISCUSSION

Dr. Harry A. Kraus: I do not believe Dr. Koll wants to create the impression that all stones in the ureter can be taken out by means of oil. Stones in the lower portion of the ureter may be removed in this way, but the larger stones in the upper portion of the ureter, especially the impacted ones, are not to be taken out in this way because they cannot be.

I do not agree with Dr. Koll in the statement that following pyelotomy no drains are necessary. In two cases in which I did not resort to drains I had fatal results, and since then I have put in a drain in each of my cases.

Dr. Robert H. Herbst: I wish to call attention to a class of renal stones which are interesting from the standpoint of operative indication. I refer to small stones located in the parenchyma of the kidney which do not produce symptoms, and the urinary output from the kidney is normal. This type of stone is sometimes found accidentally in x-ray plates taken for the diagnosis of other intra abdominal conditions. Rovsing has called attention to many of these cases which he has watched for a long time, and which have not caused any changes in the kidney. In those cases in which this type of stone coexists with stones in pelvis or calices, I think their removal is indicated provided this can be accomplished without too much damage to the kidney parenchyma in the search for the stone. There is little doubt that some of these kidneys are more severely damaged by an extensive search for such a small stone, than they ever would be from the presence of the stone.

Dr. Gustav Kolischer: It is impossible to generalize and lay down hard and fast rules. It is incorrect to

say that ureteral stones located in the upper third of the ureter will cause symptoms, and a stone situated low down will not. Indications for interference are not formed by the location in the ureter, but it depends very largely upon the symptoms manifested. Again, the size of the stone has nothing to do with its spontaneous passage or its passage aided by the injection of any lubricant. When I devised this method of bringing a stone out of the ureter by injecting oil, it happened accidentally some thirty years ago, at which time I was called in to help make a differential diagnosis between renal colic and appendicitis. In order to do that I passed a ureteral catheter. In those days we believed that if there was a stone in the ureter we necessarily could locate it and feel it and diagnose it by the introduction of a catheter. It happened that I did not have an elastic catheter but a metallic one which was used in those days. I introduced the catheter, hit the stone, got a click, and made my diagnosis. Then it occurred to me as I hit the stone, to bring it down by injecting oil, which I did, and a large stone was passed. In some cases incredibly large stones will pass spontaneously. The indication for interference is the syndrome of symptoms, not the size of the stone or its location.

Occasionally a stone impacted in the lowest part of the ureter, the intravesical part, may cause serious symptoms, but quite often it does not. If the stone is tunneled it does not bother the patient because the urinary jet is ejaculated through a hole in the stone. In some cases we cannot pass the catheter at all because there is severe inflammation about the stone, with subsequent swelling and infiltration of the mucosa which may lead to uretero-renal reflex and to temporary inactivity of the kidney.

The removal of a stone from the ureter before ureteral catheterization came into general use and the injection of oil, was practiced by surgery. If a stone was discovered in the ureter the patient was operated on because operators enjoyed the technic of the operation. Later, however, it was found that ureteral stones not infrequently passed spontaneously. Leonard called attention to this fact. People who tell the truth will tell you that the exposure of the ureter in its continuity is always attended with great difficulty. Stripping the ureter may lead to necrosis. We experience this after the operation suggested by Ries for the removal of carcinoma of the uterus. Occasionally following ureterotomy there is necrosis of the ureter, and this may happen whether you expose the ureter in the lower or upper or middle third. There is also the danger of subsequent cicatrization and kinking of the ureter. Even where a small stone is removed the kidney may be put out of commission. This will occur in the hands of the best operators, so it is not the fault in technic but a fault of the method. A permanent ureteral fistula may result so that finally the kidney has to be removed.

Then came the enthusiasm for the use of the cystoscope, and it was thought that every ureteral stone

had to be removed by injecting oil. If a stone is caught in the lower third of the ureter, and severe inflammation and reaction sets in, you can understand that an attempt at removing it by cystoscopic methods would produce great damage to the patient. Poking around in the inflamed and infected tissue may start pyelitis or pyonephrosis or a purulent epididymitis with all the various sequelae. If a stone is caught in the lowest part of the ureter and produces serious inflammation it is not only dangerous to attack it through the cystoscope, but it is nonsensical, because you lose all the advantages of the cystoscope on account of hemorrhage at the mouth of the ureter which clouds the field of view. In such cases cystotomy is a simple and safe operation. You open the bladder under local anesthesia, split the ureteral opening with a fine cautery, and remove the stone. The bladder is sewed up tight with mattress sutures, and subfascial drainage secures primary union.

Even if the skin should give way under infection the bladder will stick, and that is the main thing. The patient does not urinate on his belly.

As to the removal of kidney stones, the statement that they are sometimes discovered accidentally does not mean much. Who would think of taking an x-ray if there were no symptoms.

From what we know of secreting organs we believe more and more they are interdependent of each other. The secretory organs influence each other; they may hamper other organs or may stop their functioning, provided the secretion becomes pathologic. The kidneys are not only very important as eliminating organs, but they always influence the whole well-being of the individual, so that we try now to correct everything that is abnormal, provided we can do so without any great risk. I do not remember any case that I have ever seen where a parenchymatous stone that was discovered did not cause any symptoms. The symptoms may not be subjective but objective, such as the retention of urea or nitrogen of the blood, and so on, as well as cardiovascular disturbances.

The methods of removal of kidney stones now are so perfect that under ordinary circumstances we practically always find these patients are very good surgical risks. Pelvotomy is a simple affair, if properly done. Nephrotomy now can be done with safety for the reason that by transplantation of fat we can prevent secondary hemorrhage. Why not remove a kidney stone before it becomes too obnoxious provided that there are no contraindications to any operation.

If the stone is movable and if its surface is very rough, the indication is for immediate or early interference. Why should we wait? All the time the stone is present it is a source of traumatism to the pelvis of the kidney, the calices or parenchymatous cavity in which the stone is lodged. We know that traumatism of the pelvis of the kidney leads to the provocation of immigration of bacteria and to their colonization, so that this overconservative attitude is not justified. We may wait as we wait in other cases, but as a gen-

eral principle we should lay down the rule that as soon as we discover a concretion in the kidney, whether in the calyx, pelvis, or parenchyma, it should be removed. It is a dangerous abnormality. It is like a diseased appendix. We have no means of telling at what particular time a stone in the kidney will take on renewed activity so as to greatly damage the kidney, and we may have to remove the kidney as a consequence, and the removal of such a kidney under such circumstances is always an admission of defeat, that we failed to prevent serious trouble in time.

Dr. Victor D. Lespinasse: We all realize that manipulation through the cystoscope in the ureter should not be carried out in the presence of marked infection or inflammation. With most ureteral stones there is some infection present but as the cases come to you this infection is usually minimal and in most of them it is safe to manipulate inside the ureter. If a patient has an acute ureteral colic, and that colic cannot be relieved by pushing the stone back into the kidney pelvis by means of the ureteral catheter, such a patient is best relieved by an open operation.

The symptoms that ureteral stone causes are not very severe as a rule; it makes very little difference whether the stone is located in the lower or upper part of the ureter. If it is of a size we can estimate of say one centimeter or less, we can safely treat it by the methods to get it down the ureter. These methods have been mentioned tonight. One method I have used for some time, although it has not yet been published. It is a lubricant that does two things. It not only lubricates, but it has a certain amount of expansion in it, and we accomplish that by injecting the lubricant through a catheter, using as large a catheter as possible, so that we can use the more concentrated material, a plain, ordinary watery solution of gum tragacanth. This, when introduced into the ureter, will absorb the water and at the same time lubricate. You are all familiar with the famous little tube you carry around in your bag, the K. Y. jelly tragacanth. When that is injected into the ureter you can fill the kidney pelvis with it if the pelvis is normal, although the maximum amount I have injected has been 5 c. c., for the reason that this amount very seldom will overdistend the kidney pelvis. It will fill the pelvis and stay a little longer, and consequently force open the ureter for a longer time. By this method my results have been considerably better than they were when I used glycerin or plain oil. But we must bear in mind, and this statement will bear emphasis and repetition, that these manipulations must not be carried out in the presence of severe infection or complete blockage of the ureter by the stone, where it may be an important element in the saving of the kidney. The kidney is very sensitive to ureteral obstruction. It is remarkable how quickly a kidney goes to pieces when the ureter is completely obstructed. If there is a small nodule that holds the wall of the ureter away from the stone, it may lie there for a long time and cause very little pathologic change in

the kidney. However, it will start dilatation of the ureter as behind any stricture.

UNILATERAL NEPHRITIS*

G. KOLISCHER, M. D. AND J. EISENSTAEDT, M. D.
CHICAGO

It was held for a long time that all inflammations of the kidney except certain extreme cases of bacterial invasion and subsequent suppuration are necessarily bilateral. This contention has been shown to be erroneous by the following findings. Separate collection of urine from either kidney has proven in numerous instances according to the microscopical characteristics and the chemical quantitative determinations, that one kidney may function absolutely normally, while the other excreted urine showing unmistakable evidences of nephritis or nephrosis.

By nephritis we understand the primary pathologic involvement of part or of all the glomeruli; while the term nephrosis implies lesions of the tubular system. Glomerular nephritis evidences itself by polyurea or oliguria associated with low specific gravity of the urine. The microscopic findings are chiefly red corpuscles, hyaline and granular casts, while epithelial and lipoids casts are absent.

The urea output is subnormal; residual nitrogen in the blood is increased. Tubular disease is characterized by the appearance of epithelial and fatty casts. Chemically sufficient elimination of urea but retention of NaCl is observed, no increase of residual nitrogen in the blood. Whether we have to deal with nephritis or nephrosis it has to be kept in mind that either disease is only a part of a general disturbance of the whole system. Neither of these renal disorders may persist for a long time independently. The diseased vascular or tubular system will after a while involve the other. If once the fact is established that only one kidney is diseased, the next question will be, when if at all a surgical interference in these cases may be indicated, if general treatment has failed. The factions will be of weight in this determination. It is known that even if severe involvement of only a part of the glomeruli is present anatomic and physiologic cure may ob-

*Read before the joint meeting of the Chicago Urological and Chicago Medical Society, March, 1920.

tain. But even moderate involvement of all the glomeruli never results in *restitutio ad integrum*.

A permanent disorder in one kidney is always a menace to its mate and consequently to the carrier on account of the mobilizing of nephrologic elements from the diseased kidney.

Oliguria, low specific gravity and blood in the urine from a trias of symptoms indicating extensive involvement of the glomeruli with little hope of recovery and great danger of injury to the other kidney. Therefore an indication for the removal of the diseased kidney has to be considered.

Operative results in such cases bear out our contention. In nephrosis surgical intervention has to be called in if we have to deal with perforating inflammation, which is evidenced by crowding of the urine with epithelial granular fatty casts, and decided cardiovascular changes. There is such a clinical entity as genuine pyelitis, without any involvement of the renal parenchyma, as is proven by microscopical findings in two of our cases. For our purpose it will be of great service to discriminate between inflammations of the kidney caused by toxins produced in loco that is by bacterial invasion, and by toxins produced somewhere else in the body without any colonization of germs in the kidney. As an example, we may quote scarlet fever or measles, and nephritis due to appendicitis. That extensive and intense pyelitis may exist without any involvement of the renal parenchyma was proven to us by two cases. Both these patients produced enormous quantities and considerable pus from one kidney, while its mate furnished normal urine. The suffering of the patients and the constant lowering of their general condition in spite of medical treatment induced us to try surgical intervention. Judging from the symptoms we diagnosed pyonephrosis and nephsectomized in both cases. The pathologic examination showed interstitial pyelitis and only that; no involvement of the renal parenchyma. While both patients recovered and are doing well, it cannot be denied, that a diagnostic and therapeutic error was committed. Very probably incision and drainage of the renal pelvis would have sufficed. We think that this error could have been avoided if the involved kidneys had been submitted to the urea and sodium chloride test.

DEFENDING THE CARREL-DAKIN TREATMENT*

W. E. POTTER, M.D.

OAK PARK, ILL.

A comparatively short time ago I read a statement in one of the magazines which said in effect, that "the man who wrote a paper should really have something to write about."

This is not a "paper." I did not come out here to give you a "paper" on, or to try to teach you the Carrel-Dakin treatment. Any person who took the course at the Army Demonstration Hospital and *mastered* this subject will tell you that he put in one of the busiest periods of a month or more that he ever put in, in his lifetime. So why should I try to tell you "all about" it in the few minutes allotted me. The only reason that I use paper is, first, "because it looks better; second, because otherwise I might not get my remarks in the JOURNAL (which is one of the first requisites of course to becoming a *very big man*), and third, to be sure to mention some of the points which I consider most important to you.

The principal objects of my remarks are: First, to those of you who are using the method successfully I only wish to say "carry on" and God speed you in spreading your knowledge of one of the *greatest* aids that has come to humanity through the surgeon in many decades.

Second, to those of you who are conscientiously using the method with *some* results that do not seem to be howling successes, or perhaps failures, I wish to say "keep at it." Don't accept the old theory that Dakin's should contain anywhere from .4 to .5 per cent of the hyposulphite. It of course should never contain more than .5 per cent, but it likewise should *never* contain less than .45 per cent. I never use less than a .47 per cent solution and I always feel that a .48 or .49 per cent solution is better.

Don't forget the flash. If this persists for a period in excess of 2 or 3 seconds at most, your solution is too alkaline to get good results. Don't accept the argument you so frequently see in the literature that they have "better luck" with the solution when they use 17.5 or 18 gm. of the dry sodium carbonate instead of 15. Stick to

*Read before the Section on Surgery at the Seventieth Annual Meeting of the Illinois Medical Society at Rockford, May 19, 1920.

the 15 gm. That is enough and more makes the solution too alkaline to give the best results. Of course, they are having "better luck" with the solution. They don't have to make it up so often but while they are having "better luck" with the solution, they are having "poorer luck" (if I may use the term) in their end result. The excess alkalinity is irritating and defeats your object. The very soul of Dakin's solution lies in its instability. The alkali makes it more stable.

If you have a "George" you may let him prepare your solution for you if you choose, but then you must let "George" disappear from the field of action. Don't accept his report on the two final tests. Test it yourself and test it every day that you use it. Do your own dressings and keep your own bacterial chart, or at least do them or oversee them often enough to *know* that they are properly done. However, if you keep your own bacterial chart, you will have the final check on all and without it any one can throw "a wrench in the gear box" and you don't know why, when, or for what reason you are failing.

Third. To those who have never tried to use the treatment, I will say, "Cheer up, wake up and come to the party. Learn it somehow, some place.

No, I do not know now where you could go to learn it. To me it is a crime that the hospitals and colleges do not now use and teach it and it will be all the more shameful if this or some other organization cannot persuade or compel them to teach it right and use it right. I predict that it will take organization and concerted effort to do it, on account of reasons which will be obvious as we go along. The system, I will admit, is highly technical and requires a great deal of painstaking care but is very simple after all and not so technical that even the simplest of us could not master it. At any rate I feel that any one so simple that he cannot master it, should not be permitted to play at our game.

With those condemning the system, we must deal a little more at length. To start with, we have the Rockefeller Institute (one of the greatest research laboratories in the world) telling us that the chlorine series of antiseptics are the best antiseptics that we have and that of all these Dakin's solution is the best. Then we had the Army Demonstration Hospital teaching it. It is

not a question of me *thinking* it is the best. I *know* it is the best. No, the Army Demonstration Hospital did not prove it to me. They don't try to prove anything to anybody. You are in the Army. They put you in there and make you work. After you have worked for a while you have proven it to yourself beyond any question. You can't turn your back on what you have proven to yourself by your own acts. Surgeon General Ireland may have and probably did make some mistakes during the period of the war. It is only human that he should. But when he instituted and maintained the Army Demonstration Hospital, he did something for which humanity will thank him until eternity. Something may supersede this treatment before that time but it is the best we have now. What then are we in danger of? Why do we have to defend the Carrel-Dakin treatment?

The principal sources of adverse criticism which we have to combat are two. The literary man and the clinician.

The reason that these two sources are so dangerous to us is because these are *supposedly* big men or they would not be doing what they are doing. They should measure very carefully what they say, because of the large numbers of men they reach and the confidence which they justly or unjustly enjoy. I would say to these gentlemen, "Watch your step lest you lose some of the confidence now reposed in you." They can do and are doing more harm to a good cause in a few minutes than Rockefeller Institute can do good in years of hard work.

What are the motives? I can only conceive of but a few:

Bullheadedness or boneheadedness. We are up against the slimy tentacles of the jealous man who don't want to see any kite fly which does not have his name attached thereto as a part or the whole of the tail.

The man who is too big and too busy or too indolent to really get down and learn the system, would sooner sacrifice an occasional limb or even a life or the subsequent general health of the patient and thinks that he is *big enough* to condemn the Carrel-Dakin treatment and get away with it. But after all, is not this great effort that is being made to discredit the Carrel-Dakin treatment due to the fact that there is such an enormous lot of work to be done for the com-

paratively few dollars you can get in most cases for using it? I believe it is.

I am not a philanthropist and I don't believe in "state medicine" yet, and do feel that a man should get pretty good pay for what he does, but if this profession has gotten to where it reckons its success by the dollars alone, then I think it is a pretty sorry state of affairs.

Isn't it too bad that this system can't be used with the same lack of knowledge and the same lack of precision and the same gusto with which the present day surgeon swings his knife? If it could be done as easily and we could get the same amount of advertising that we can for transplanting monkey glands to the human, we would all be using it.

Apropos of the case of the literary man, I wish to call your attention to an article in the February, 1920, *Surgery, Gynecology and Obstetrics*, entitled "Acute Empyema of Thorax, Treated by Minor Intercostal Thoracotomy," by Paul W. Aschner, M.D., of New York.

Now let me say that I have not picked on this article because it was Aschner's nor because S. G. & O. published it, but because it was only a fair example of what you are reading in many of the leading periodicals.

In summing up he gives:

—Results of Using Dakin's Solution—

Treated with Dakin's

Cases.....23 (8 adults)
Hospital stay.....43 days (18 to 91)
Suction drainage re-
newed.....4 cases

Treated without Dakin's

Cases.....28 (10 adults)
Hospital stay.....39 days (16 to 74)
Suction drainage re-
newed.....3 cases

Doesn't that forever damn the use of Dakin's solution?

Prior to this summary he states that the Dakin's solution was used every 2 hours by day and twice during the night. Pretty clever, isn't it, either advertently or inadvertently. He doesn't claim to be using the Carrel-Dakin treatment, yet he emphasizes the fact that he used Dakin's and hopes that you don't know that he used it improperly both as to time and mode of application, but leaves the unwary, by his comparative table, to condemn the Carrel-Dakin

treatment, or to say the least, the Dakin solution.

He ought to know if he is going to talk intelligently on the subject, that he can't disregard the Carrel mode of application and still get results from the Dakin's solution. He ought to know that he can't use the solution any less than once in 2 hours either by day or night. He ought to know that Carrel-Dakin treatment presupposes and includes bold surgery. I say bold surgery. It may be bold from the surgeon's standpoint, but conservative from the patient's, for whatever will save the life or limb of a patient or give him a better end result is conservative from his standpoint.

Again he tries to hoodwink you by bringing Major Moschcowitz to the foreground. Quoting from the article he says, "If, however, the lung is found to be persistently fixed in an unfavorable position and incompletely expanded, we believe that operative interference is indicated, and our preference is for the performance of major intercostal thoracotomy which aims to mobilize the lungs. Although disinfection of such cavities is attainable, and closure of the wound takes place (we agree with Moschcowitz in not employing secondary suture), dead spaces of this kind *frequently* become reinfected." Why don't he say that they all do, for they do.

Why does he bring Moschcowitz in, in this way, if he were not trying to fool you? We all know Moschcowitz and know him well and know that he has not been spending his time trying to do such impossible things. We know that he knows that Carrel-Dakin treatment contemplates bold surgery and that it doesn't take the place of either good brains or good surgery.

We could keep on going through this article and others, but what is the use and time does not permit. I only ask you to read between the lines and ask yourself, "What is the big idea?"

The only answer that I can see is "The lime-light," and to suggest *his* method. To me he has not proven or disproven anything except to prove *his* inconsistency.

As to the other source now, the Clinician.

We have one very glowing example of this type in Chicago. He once criticised gynecologic surgery, calling it "a disgrace" and advised that it be stopped. Not so many years ago he condemned prostatectomy and later told us of *his*

own method of doing it. Again his name to the kite tail. The above facts, except with those who know him, do not minimize the damage he is doing by his recent open condemnation of Carrel-Dakin treatment in his clinic where hundreds are accepting his word.

Recently, as a member of the Standardization Committee of the West Suburban Hospital, I wrote to about 20 of the principal hospitals of Chicago to find out what other hospitals and other men were doing and thinking—about Carrel-Dakin.

The first reply received was from the hospital where the above mentioned gentleman does all his work. In fact, he is tied there body and soul. The reply was made on the bottom of the sheet containing my inquiry and reads as follows:

"We have not used Carrel-Dakin treatment enough to express an opinion. We have no machine for its preparation.

"Signed....."

If this is true and I believe it is, where is the foundation for conclusions drawn by the man in question?

Again, if this is true, why has it not been tested and fully accepted or completely rejected? This is one of the largest hospitals on the West Side and directly connected with one of the colleges. Do you get me? If I spelled the man's name it might possibly be just a little bit clearer but I don't know that he has signed any articles and I don't want to sign it for him.

As to the other hospitals that replied to my inquiry:

One reported very favorably and said they were using a Wallace & Tiernan gas machine for making Dakins. A very good sign that they are really using Dakin's solution and by the way the only gas machine I have been able to locate in Chicago aside from my own.

The chief of another hospital writes as follows:

"We use it in cases of necrotic tissue which is infected as the solution clears the wound of the necrotic substance. In this class of cases we are very much pleased with its use. We have not used it in empyema cases.

"We have no Wallace-Tiernan or other machine for preparing the solution, but use it ac-

cording to the formula which we have taken from the Carrel-Dakin book."

Remarking on the above reply, I would say that I am glad that this man has proven to his own satisfaction at least one of the principal actions of Dakin's. This is also a good sign and perhaps he can be persuaded to go further. He is not treating empyemas with it because he hasn't treated one with a perfect Dakin's or he never would stop.

In spite of the fact that he is using the Carrel-Dakin formula for the preparation of Dakin's from calcium chloride, I do not believe he is getting the same results that he would get if they used a gas machine. I do not believe that any hospital or any individual can get the best results without a gas machine. Not because a perfect Dakin's cannot be made from the chloride. It can be, but take my word for it, it won't be. "George" gets tired of all this time and labor spent every second or third day (and a good solution under ordinary conditions does not last longer), so he just slacks on you. There goes the first "wrench in the gear box" and you haven't time or the patience to find out where the trouble is so you just draw a bad conclusion about Carrel-Dakin. It is natural to suppose that "it can't be done." It is timesaving and painsaving to draw this conclusion, even though you bury the patient. But you are only fooling yourself. The public is not going to stand for it long. I am warning you now, gentlemen of the Surgical Profession, the Carrel-Dakin treatment for infected wounds is one dose of medicine which you are going to have to swallow whether you like it or not. It may taste worse than castor oil to you but I dare say that after "the spirit moves you" your conscience at least will be a lot clearer and you will feel a lot better than you did after the oil.

But just stop and think; in a city of approximately three millions of people and all these big surgeons, one hospital can boast that it has a gas machine. Another, to say the least, is conscientious enough to be using the Carrel-Dakin formula and as far as the rest are concerned, the Lord only knows what kind of so-called Dakin's they are using, but I dare say their results are quite negative or indifferent and speak for themselves.

What is the reason? These knockers. If these

supposedly big men were not knocking it, we smaller fellows would not dare try to get along without it, and then they would claim that you couldn't do it right because you were not connected with some big institution or working in their elinie.

The above picture is a fair picture, I am sure, not only of Chicago, but of the whole state and the whole of the United States, shameful as it is.

In spite of the fact that I feel that a man surely and only shows his ignorance when he condemns this system, I hope there will be a full and free discussion not only of the Carrel-Dakin treatment but of the whole situation as it lies before us today.

Now perhaps I have not made any really constructive remarks and perhaps I should be censured for some that I have made, but the thing I have tried to do is to make some of these knockers so mad that they will try to defend themselves. Then they're hooked. There is no defense. There can't be any defense until a better system is evolved.

SKULL FRACTURE, TWO CASES.*

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The following is a report of two cases of skull fracture with an unusually long interval after the accident:

Case 1. A retired farmer, aged 71 years, with a negative history. In a street accident he was thrown from his buggy, sustaining an injury to his left forehead and an abrasion of his right patellar region. The forehead presented a wound about an inch in length which bled freely for the first ten or twelve hours following the accident. The patient made a prompt and apparently uneventful recovery except that the knee caused him some slight discomfort. He attended to his usual duties and recreations as before—frequently went fishing.

About two months after the accident his wife noticed a gradual but progressive impairment of his mental faculties. He did and said odd things. This progressed from a slight dragging of the right lower extremity to a complete right hemi-

plegia and semi-coma during the following fortnight.

Eighty-four days after the accident the writer was called in consultation with his physician and the examination and history suggested a lesion in the left Rolandic area.

In accordance with the findings and history an operation was advised and accepted by the family but was postponed for three days in order that his son, residing in Kentucky, might be present.

Eighty-seven days after the accident a left sub-temporal craniotomy was performed, revealing a large hematoma which completely displaced about five-sixths of the entire left hemisphere.

The subdural cavity was filled with gauze 36 inches wide and 46 inches long to prevent damage to the tissue by a too sudden return of the blood after relief of pressure.

The patient made a prompt and uneventful recovery. He lived in good health eleven years and died of broncho-pneumonia at the age of eighty-two years.

Case 2. A laborer, aged 64 years, with a negative family and personal history, sustained an undepressed fracture of the skull by falling backwards off a truck load of baled hay. After the accident the patient remained at home for one week but suffered from a constant headache. At the end of a week he returned to his usual occupation—a laborer in a coal and lumber yard, which duties he discharged for another week.

Fourteen days after the accident, while delivering a load of coal, he was observed sitting on the street for one hour by a lady who finally inquired whether he was waiting for some one and he replied, "Yes, that he was waiting for some one to tell him where to put the coal." A little later that day he fell over in a faint. His physician, Dr. Curtis E. Powell, was called and reported nothing remarkable in the case but the state of semi-forgetfulness. The following two days he was able to be up and about the house and ate his meals but with no idea of an adequate amount. Two days later his right arm and leg were paralyzed and he was only able to ask and answer questions in whispers. The next two days he was able to feed himself with his left hand, but after this he was unable to direct his hand to his mouth and it became necessary to feed him.

Eighteen days after the accident and two days

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after the onset of hemiplegia he presented complete aphasia.

Twenty-nine days after the accident and fifteen days after the onset of hemiplegia he was admitted to Katherine Shaw-Bethea Hospital, Dixon, Illinois, and the examination revealed a patient with aphasia and a right hemiplegia in fair physical condition. When requested to raise his left hand or put out his tongue, he did so at once. Pulse rate, eighty; respirations, eighteen to twenty; temperature, normal; systolic pressure, 140 mm.; diastolic, ninety. Cardiovascular findings were negative except a moderate arterial sclerosis. The pupils were equal in size and presented no abnormality. Dr. T. O. Edgar, ophthalmologist, reported the fundal findings negative. Reflexes, right knee and ankle jerks exaggerated and Babinski present. The urine contained trace of albumin and an occasional hyaline cast.

Diagnosis: The history of an injury and the clinical data suggested a probable traumatic lesion in the motor area of the left hemisphere and accordingly an exploratory operation was advised and accepted by the family.

Operation: Thirty-one days after the accident an exploratory operation was performed by an osteoplastic resection of the left parietal region, revealing a subdural hematoma about the size of an orange of medium size. It was evacuated through two small dural openings. The patient made a prompt and uneventful recovery. He has resumed his usual occupation as a laborer in a lumber and coal yard and the only difference that I have observed since the operation is in his blood pressure. It has risen from 140 to 165 mm.

DISCUSSION

DR. GEORGE F. THOMPSON (Chicago): Subdural hemorrhage may come from the longitudinal sinus or the lateral sinus, but in those cases progress of the symptoms is as rapid as an extradural hemorrhage and the disturbance is more marked. Longitudinal sinus is practically the same as a little meningeal hemorrhage, only a slower onset and a little different course of symptoms. But when we come to the subdural hemorrhage caused by laceration of the veins emptying into the lateral sinus, especially at the upper part of the cerebrum, we have a different matter. There a laceration of veins, which may be due to accident, compound fracture, to puncture and stab wounds, etc., exists. Or, on the other hand, it may be due, as apparently was the case here, to blunt force pro-

ducing a fissure, which may tear the veins, or an action similar to that in which you have a rupture of the middle meningeal without injury to the skull either on the same side or on the opposite side. These veins, attached as they are to the longitudinal sinus which in turn is fixed in the dura and to the bone, and they being fixed more or less by fibrous tissue, tear readily, do not collapse and hemorrhage from them is slow.

So, the whole series of symptoms that comes after those hemorrhages is characteristic, provided it is present in sequence. The patient manifests the disturbance of consciousness such as is found after any cerebral concussion, and then there is a free interval, and the free interval may last in this case much longer than in the extradural hemorrhages. Cases have been reported where it has lasted twenty, thirty, forty days—these cases here, this one especially, about two months after the accident. You see, that would be about sixty days. That is about the limit on it—I don't know of any in the literature lasting over sixty days. But once they begin to manifest these symptoms, then the progress is more characteristic provided the onset is slow, the mental faculties are disturbed more and the focal symptoms are a little different than in extradural hemorrhage.

Of course, in extradural hemorrhage, usually in the middle fossa, the arm center is the one that is most frequently involved first, and then it extends to the face very frequently. On the other hand, in the subdural hemorrhages, very frequently the leg center is the first one involved, it being high up, and then gradually the others may be involved, and sometimes you have a simple monoplegia there of a leg; often it will extend only to the arm.

With marked subdural hemorrhages, you get facial movement, and also what you do not get so frequently in extra dural hemorrhages, nerve lesions owing to the accumulation of a larger amount of blood at the base of the brain, because of the fact in an extradural hemorrhage there is a dissecting away of the dura; in a subdural hemorrhage, there is already a cavity there, the blood flows down that easily and collects at the base of the brain, producing these symptoms.

So that with such a variety of symptoms, slow onset, a free interval, and progress from the leg downward instead of from the arm, the diagnosis is plain.

And then you know unilateral convulsions are much more frequent in subdural hemorrhage than in the extradural hemorrhages. Temperature is higher as a rule for some reason, so that with a clear case one can usually make a diagnosis.

In the second case, you see the interval was shorter, fourteen days after the accident he was observed doing something peculiar, a couple of days after that he was up and around. Eighteen to twenty days after the accident, his right arm

and his right leg were paralyzed, and he had aphasia following that. He was operated on some thirty days or so after the accident. That was not as difficult to diagnose, but still a question of diagnosis did come in there. His pupils were negative and he had a little albumin, etc.

Operation there showed a subdural hemorrhage of considerable size, and he has recovered.

Where you see these cases, the difficulty in diagnosis comes in in making a positive diagnosis even in view of the fact that you have an accident before. Neither of these accidents were of much magnitude. The first one was just a slight wound, as I take it, of the scalp. I don't know that a skull fracture was discovered at that time. The other man did not have any evidence of skull fracture and none was discoverable. So that after a long interval of time we begin to get signs of a gradually progressing paralysis, localizing symptoms. Diagnosis there would rest between, for instance, in this old man, some form of intracranial cerebral circulatory disturbance, arteriosclerosis, thrombosis, etc.

And then, in the second place, one would have to consider the possible results of a hematoma of the dura so-called, after that length of time. You have a hemorrhage with your early symptoms. They may clear up, as you know, spontaneously, but inflammatory changes may occur, the products of inflammation accumulating that may cause these troubles, that is, the localizing symptoms.

Another cause or factor which would have to be eliminated would be the possibility of secondary hemorrhage. After having had a partial organization of the clot for some time, a severe mental strain, anger or emotion or coughing, sneezing, etc., has been known to produce secondary hemorrhages in these primary traumatic hematomas.

Another cause or factor would be the so-called secondary apoplexies of the brain, traumatic apoplexies, in which patients have frequently been operated on for supposed pressure symptoms with focal findings, extradural or subdural, as the case may be, with paralysis, increasing gradually and progressively, and nothing has been found in the way of an extravasation of blood above or below or inside or outside the dura. On autopsy, the findings have generally been minute punctate hemorrhages in the brain, especially in the floor of the fourth ventricle and in the medulla, sometimes more gross lesions, and these explainable by the fact that one was primarily dealing not with a concussion of the brain nor a secondary hemorrhage from laceration of the vessels, but from a primary contusion of the brain with more or less laceration and multiple symptoms.

I think Dr. Murphy ought to be congratulated very highly on his successful diagnosis and treatment of both these cases.

COLON MALFUSION: SYMPTOMS, ANALYSIS OF 100 CASES*

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With an experience of nearly 150 operations for the relief of disabilities due to colon malfusion, a considerable opportunity has been afforded to study the correlation between the pathological findings and their bearing upon the production of symptoms. The percentage figures quoted throughout this article are based upon the findings in the first 100 consecutive operations, the principles and technic of which have been described.

Colon Malfusion. The process by which, in the embryo, the colon becomes agglutinated and fixed in position, we speak of as fusion.

When colon fusion is well done, so as to insure stability, all parts of the bowel, except the transverse colon and the sigmoid flexure, are uniformly and smoothly attached to the posterior abdominal wall in such a manner as to permit no undue lost motion or irregular strains.

In malfusion, however, we are dealing with the badly fused colons. It is in these colons that we encounter; first, certain developmental bands, veils and adhesion strands, or hyperfusions which unduly bind the bowel; second, certain areas of loosely attached bowel, *hypofusion*, which permit of lost motion, sagging and ptosis.

These hyperfusion bands, if unaccompanied by hypofusion sag, may exist without symptom production; for under these circumstances we do not have the play or lost motion which is requisite to induce a tug or pull upon the bands.

The traction upon these bands induces congestion and hyperplasia, resulting in their overgrowth and their greater power to produce symptoms, as time progresses.

Hypofusion or ptosis, if not accompanied by hyperfusion bands, may likewise be unproductive of symptoms, for under these circumstances, the range of lost motion is not suddenly and locally restrained and therefore does not inflict trauma. Thus we explain the occurrence of marked ptosis of the colon without symptoms.

Therefore, this underlying principle in the production of symptoms in the various types of colon malfusion, is dependent upon the coexist-

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once of hyperfusion with hypofusion. This permits of lost motion, which is sharply limited by local pull or traction, which in turn inflicts damage at both ends of the restraining bands.

Characteristic Symptoms. There are many incorrect diagnoses and operations performed for chronic appendicitis, ovary trouble, floating kidney, gall bladder disease and ulcer of the duodenum and stomach. After the operation, it is a great embarrassment to the physician to find that his patient has been in no way relieved. These cases, in our experience, are practically all cases of colon malfusion, in which the symptoms simulate those of the above diseases. Thirteen per cent. of our cases had such former operations, without relief. This is striking evidence of the necessity of a better understanding of the pathology and the clinical histories of this condition, and of the value of formulating, if possible, a definite clinical picture, which will be distinctly characteristic of these cases.

We have found that there are definite and distinct symptoms, which we have come to regard as characteristic if not actually pathognomonic of this general condition, no matter which of the various types the apparent outstanding symptoms present. The profession has become so accustomed to think of these colon disturbances of mechanical origin, in terms of stasis and intestinal toxemia, that it overlooks the fact that these symptoms are merely some of the symptoms that are sometimes found as a result of malfusion.

It is a well known fact that the junction of a fixed portion of intestine with that of a movable portion, is subject to symptoms due to traction. The well known examples of this are at the terminal ileum and the beginning of the sigmoid flexure. Less well known, though more potent in producing traction and therefore symptoms, are certain points in the course of the colon where bands of relative hyperfusion are encountered in association with hypofusion of adjacent segments. The points of special frequency for these hyperfusions are as follows; the terminal ileum (6%); the meso appendix (29%); and cecum (4%); ascending colon (53%), varying here from slender ligamentous bands to broad veils; and most frequent of all, the hepatic flexure (67%), especially at its juncture with the transverse colon; the splenic flexure (22%); and the sigmoid flexure (3%).

When these formations which inhibit motion of the bowel are associated with adjacent movable parts, physical exertion or jolting will induce traction strains which inflict a definite amount of trauma at both ends of the attachment. This results in the following characteristic, clinical manifestations.

1. *Dragging Pains.* These patients complain of a dragging sensation in the abdomen and they show an involuntary tendency to place the hands on the abdomen, to steady and lift the bowels, which gives a certain degree of relief. Be it understood, that while the physician may attribute certain vague and ill defined symptoms to neurasthenia, dragging sensations are not to be regarded as evidence of neurasthenia, as they have a direct and tangible mechanical foundation for their presence, and they present one of the most characteristic ear marks, as a differential sign.

2. *Exertion Pains.* Undue exertion, especially associated with stooping over, lifting, sweeping, and reaching with the arms above the head, is productive of pain in the abdomen. The pain is sometimes sharp, like a stitch in the side, sometimes dull and sometimes is not noticed at the time of exertion, but follows, possibly not until the next day, as a lame soreness which is also tender to the touch and unaccompanied by fever. The patient does not always associate these attacks with exertion, but on careful inquiry by the physician, it will be found that the spells of soreness bear an invariable relation to such exertion.

3. *Jolting Pains.* These patients are likewise distressed by the jolting, incident to riding over rough roads or on the street cars. They will often volunteer the information that they cannot stand riding in the train, as it produces soreness in the abdomen. One patient presented an interesting history of soreness in the abdomen on trying to sleep in a train, lying on her back. The wobbling of the abdomen due to the motion of the train, set up a very distressing tenderness; on changing her position, so as to lie on her face, and thus splinting and immobilizing the colon, the distress abated, and by morning she was restored to a fair degree of comfort.

4. *Posture Pains.* The position of rest in bed is interesting and characteristic. It will be found on inquiry, that these patients have a favorite

position in bed usually on one side or the other, with the trunk and thighs flexed, because dragging or pulling pain is produced by lying in other positions. Lying flat on the back is most often complained of, in which case elevating the arms over the head, further aggravates the distress. While this symptom is found less constantly than the above, when it is present, it is characteristic.

Thus we have in these four types of pain, a group which is not encountered in other abdominal condition. They are almost constantly present in these malfusion cases, and should be detected and their importance recognized by the physician, as they have direct pathological basis for their presence and the most important diagnostic significance.

Symptom Analysis in 100 Cases. In the consecutive series of 100 cases, whose symptoms were sufficient to warrant operative relief, a great variety of conditions were encountered, varying from a mild case simulating appendicitis in an otherwise robust and formerly vigorous youth, to the most dejected picture of exhaustion and invalidism in the long standing case of viscerop-tosis. A more detailed perusal of our statistics cannot but be of interest.

Age. The average age at time of operation was 29½ years; the largest number of patients appearing in the decade from 20 to 30 years of age; the youngest patient was 4 years and the oldest, 57 years.

Weight. Ninety-four per cent. of these patients were below their usual weight. Thus loss of weight is a very constant finding. The average loss was 13½ lbs. Six per cent. showed a loss of over 40 lbs.

Sex. While this condition is preeminently found in the female, it is by no means confined to this sex. Fourteen per cent. were males and 86 per cent. females. When we further consider that 60 per cent. were married, and 40 per cent. unmarried, we will see that the formerly prevailing idea, that multiple pregnancies were the common cause of ptosis, is evidently incorrect. In only 2 per cent. of this series, did we regard the onset of symptoms as having directly resulted from pregnancies. Two per cent. acquired their symptoms from direct severe trauma; 96 per cent. were apparently true cases of unprovoked development of symptoms, due to congenital malfusion. Although it was not infrequent to find that the very first onset of disturbance was noted

following an ordinary slight trauma, just as others started after some slight undue exertion.

Duration. The average time since the appearance of the first symptom was 7½ years. Average duration of marked symptoms, 2½ years. Average duration of actual incapacity, whereby the patients were regularly disabled from doing work for a definite percentage of time, 1½ years. The average percentage of time lost during this 1½ years was 45.7 per cent.

Onset. Contrary to the general impression, we find that the onset of symptoms occurs in youth and young adult life. The first symptoms appeared previous to the 20th year of age, in 48 per cent; and previous to 30 years in 86 per cent. It is characteristic of these histories that the development of symptoms is gradual, appearing at first as but slight consciousness of distress in the abdomen, which gradually and steadily increases until the patient is distinctly conscious that there is something definitely wrong. The onset was gradual in 92 per cent, while in 8 per cent it is classified as having come on suddenly.

Individual Symptoms. It is evident, considering the pathology, that our symptoms will be caused by one of the following factors:

1. *Mechanical:* from traction strains, constrictions, and angulation of the bowel. Secondary to constrictions, an ultimate effect is toxemia from intestinal absorption or from bacterial infection of eroded areas of the mucous membrane, forming a "Focal infection."

2. *Reflex:* due to trauma inflicted by traction strains, inducing certain functional derangements both motor and secretory of the alimentary canal and bile passages.

3. *Circulatory:* Considering the unfavorable conditions for proper circulation in prolapsed viscera, passive congestion or imperfect venous return is a definite factor in the production of alimentary as well as general symptoms. The sallowness of complexion, noted in 65 per cent of these cases, I believe is not all due to intestinal toxemia. It is possibly, in part, hematogenous and certainly in a large proportion of the cases it is due to interference with the biliary passages.

4. *Nervous:* The insult to the sympathetic nervous system offers a broad field for further study. It results in neurasthenia and hyperaesthesia. Traction upon the mesentery and in turn upon the solar plexus, will not only produce disturbance in the motor, secretory, and circula-

tory balance of the viscera but it also has in all probability its most profound effect in inducing a state of continuous and progressive shock to the nerve cells which expresses itself in the form of fatigue.

Stomach Symptoms. Nausea was present in 52 per cent of the patients, recurring with exacerbations following exertion. Distinct hunger pains were complained of in 3 per cent. These patients were relieved by taking food and complained most after exertion or jolting. Recurrent vomiting occurred in 29 per cent, and in 12 per cent of these it occurred in the most persistent form, actually endangering the life from starvation. This vomiting was characteristic, in that it occurred irrespective of the quality of the food taken, liquids and solids alike being rejected, and the absence of blood. These spells of vomiting were precipitated by exertion or jolting and could only be controlled by complete rest in bed. Occasionally bromides were beneficial. When the attack subsided, the patient could almost immediately return to solid food without distress.

Constipation. Contrary to the generally conceived importance of this symptom in this class of patients, our series showed very slight constipation in 45 per cent, moderate in 11 per cent. This, I would venture to say, is but little more than is usually found in any series of 100 individuals. There was no constipation in 17 per cent. The number presenting marked constipation was 27 per cent, or approximately one in every four cases. Diarrhea was present in 1 per cent. This was evidently not a fermentation diarrhea, because it was a constant symptom, which was evidently due to atony that was found in the longitudinal muscle bundles of the colon.

Fatigue. This is one of the most characteristic and constant symptoms to be found in these cases, after the case has become established, and is often present for a long period as practically the only tangible symptom before other symptoms have developed. It was present in 94 per cent of our cases, in 31 per cent of which it consisted of a more or less profound state of exhaustion. This important and constant symptom is readily explained by the frequently repeated trauma of the traction strains, shock and exhaustion of the sympathetic nerve centers, and finally by toxemia.

Neurasthenia. These patients are proverbially known to the practitioner as neurotics. In our series 70 per cent of the patients presented neu-

rasthenic symptoms. I find that there is much uncertainty and confusion in the average medical mind as to what is a neurasthenic symptom. Neurasthenia should not be confused with hysteria. In the latter there must be the true stigma of suggestion in relation to the symptoms, whereas neurasthenia is really but another expression for nerve fatigue. Is not the tendency to belittle the symptoms which we conclude are simply neurasthenic, in reality often but a subterfuge to hide our ignorance; or, in other words, a veiled admission that there is an actual factor productive of injury, which is just beyond our comprehension or our ability with which to cope? I am sure that with our further understanding of the principles herein described, we cannot help but feel a better respect and a closer understanding of neurasthenia as presented in this class of cases. The importance of neurasthenia as a differential sign is at least worthy of our respect. Psychasthenia or the centering of the mind upon the symptoms with more or less erroneous and obstinate conclusions by the patient is a somewhat different condition. This was present in 12 per cent of our cases.

Pain. Pain is not usually of a pronounced type, which at once distinguishes it from the colic of appendicitis or of gall stones. In 8 per cent, however, it did present a more or less colicky type. More characteristic, however, is the steady dull soreness or lameness complained of in 95 per cent of the cases, associated with the attacks, above described, of more acute exacerbations as reported in 44 per cent of these cases. The frequency of these attacks averaged once a month. The most characteristic, if not pathognomonic symptoms, referred to above, are the dragging pains in 96 per cent and the exertion and jolting pains in 95 per cent.

Location. These pains are most common on the right side, extending up to the right flank and associated with backache in the region of the kidney. They are often described as running across the bowels and becoming general. Usually the patient complains of one or more points of vague persistent soreness with exacerbations located as follows:

Appendix Region, 92 per cent. The pain is not sharply localized as in appendicitis, but is more or less diffused and is usually a little high for the appendix, fever is absent and soreness

remains between attacks. This is often erroneously diagnosed chronic appendicitis.

Right Flank, 95 per cent. Pain here is also diffuse, extending from the region of the ascending colon backward to the lumbar and kidney regions. These pains are not associated with rigidity, are usually accompanied by hyperesthesia of the skin and sometimes by a tumefaction of the cecum and ascending colon, simulating appendix abscess. These masses are due to fecal accumulation and sometimes, I am convinced, simply to congestive thickening of the colon walls.

Region of Gall Bladder and Pylorus, 68 per cent. At times these pains simulate true biliary colic, though not quite severe enough, and should also be differentiated from those of ulcer or cancer.

Left Flank and Splenic Region, 25 per cent. In this region the pains are usually more sharp, like a stitch in the side, although they often present the steady soreness in addition.

General Pains Throughout the Abdomen, 70 per cent. These appear only at the times of the exacerbations of the pains in the above regions and seem to be an overflow from them. At these times the entire abdomen becomes sensitive, so that the pressure of the clothing at the waist line or corsets cannot be tolerated. This is evidently a simple general hyperesthesia of the abdominal walls.

CONCLUSIONS.

Let us, therefore, consider the various anomalous positions of the colon and the various developmental membranes, bands and veils associated with it, as the two extremes, constituting the fundamental elements of the pathology of colon malfusion; and the coexistent association of these two phases of malfusion, as being the requisite of symptom production.

The characteristic points in the clinical history, which should serve to definitely distinguish the colon malfusion case from those of other common abdominal conditions, are as follows:

1. Gradual onset of indefinite abdominal disturbance.
2. Fatigue, usually dating back to early adult age, with physical inefficiency and loss in weight.
3. Pain, dragging in type, with more or less steady soreness, which is aggravated by certain postures, and recurrent exacerbations which are definitely induced by exertion or jolting.

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DISCUSSION

ABSTRACT

Dr. Harger: I would like to ask Dr. Hazen what line of treatment he uses in these cases.

Dr. Grinstead (Cairo): Noted the tendency in recent years to operate on patients who have neurasthenia and hysteria for pain in the belly from any cause, without satisfactory results.

He feared that if not carefully considered, this sort of paper will encourage useless and unsatisfactory abdominal surgery.

He quoted the Philadelphia neurologist, Francis X. Dercum, to the effect that he rarely got a case of neurasthenia or hysteria lately that hadn't had from one to four or five abdominal sections.

Dr. C. U. Collins (Peoria) recalled a patient that gave very much the symptoms described in this paper a few years ago. The patient came into the hands of Dr. Hazen later, was restored to health, and is still well.

He also admitted that he had operated on some colon cases and had not got the results that Dr. Hazen has. His personal experience leads him to let these patients alone, but he thinks that Dr. Hazen, after he has had three or four hundred more, perhaps can tell us definitely just which patients to let alone and which patients to do operative work on. He also thinks Dr. Grinstead is right, that the rest of us had better let these cases alone until we know more about them.

Dr. Harris (Chicago): Our idea of the normal colon is a condition which we formerly thought ought to exist, but which we rarely find. In other words, the mal-locations are much more frequent than are what we supposed to be the normal location.

They certainly never cause symptoms in the great majority of the cases. Something else is the foundation of the symptoms.

An individual forty-five years of age had one of the worst malformations he had ever seen. Several inches of the lower end of the ileum had no mesentery at all. It lay directly in contact with the posterior and lateral abdominal wall and extended from the usual location of its terminus up along the outward posterior abdominal wall to the under surface of the liver, where it entered the colon which was also fixed in that location, and what we normally call the ascending colon was a descending colon. It descended to the usual location of the cecum and then ascended again to the under surface of the liver, and both of these portions of the colon were adherent, firmly bound together and fixed to the posterior wall.

Judging purely from the anatomical condition, this patient should have had symptoms, yet he never com-

plained of anything abnormal in his abdomen until he was forty-five years of age. Then he began to have symptoms.

In these anomalies, so long as the intestinal wall has its muscular tone and continues to perform its function normally they will have no symptoms. When the muscular tone begins to fail they begin to have symptoms. So that the anomaly is simply a predisposing condition, and on that predisposing condition must be engrafted something else before the symptoms are conclusive.

Another point is when to decide that the symptoms are due to the local conditions entirely, which may be corrected by a surgical operation, and when the symptoms are due to a condition of the nervous system as in the case of a neurasthenic. That is the most difficult of all to determine. It is common to find these neurasthenics, hysterics, operated on without any benefit, and that is so universally the rule that he does not operate on them unless the neurologist is perfectly satisfied that he should, and thinks there is some surgical condition which can be relieved.

Dr. Roland Hazen (Paris, Ill.), believes that every case should have a thorough trial on medical treatment by such means as supports, calisthenics to improve muscular tone, and posture treatment, so as to tend to encourage the viscera to remain up, before resorting to surgery.

The idea in the mind of most practitioners is that colon cases are merely neurotics, and therefore non-surgical. There are other conditions in the abdomen which are undoubtedly surgical, where the outstanding symptoms are neurasthenic.

We know that certain displaced uteri can exist without symptoms. On the other hand, if the ovary is behind the uterus with the uterus resting on the ovary, every motion of jolting, jogging, and exertion, causes nervous symptoms. Cause and effect are similar, and surgical relief is as rational for the colon sufferer as for the uterine.

We have the toxic symptoms that Dr. Harris has spoken of, where there is atony of the intestinal walls, with bacterial invasion and toxemia. These are late or secondary manifestations and should not be confused with the characteristic symptoms, that will afford the early diagnosis and relief.

Some of our patients have been diagnosed duodenal ulcer, or gastric ulcer, by eminent men, on account of the persistent vomiting and soreness. In one case, I tried my best to get the man to admit that riding in an automobile on the rough roads would bother his side, or that exertion, as wielding an axe, would bother his side. But he always answered, "No, when that pain is not there I can do anything; when it is there I am laid up; when it goes I am all right." In this case, the characteristic symptoms were wanting, it was not a malfusion history, and it proved at operation to be a true duodenal ulcer.

When you think of the colon being suspended by strands of fibrous fasciculæ running from the flank out to the posterior surface of the colon, it is not unlike the suspension of an individual lying in a

hammock. If the strands are all in good condition, the body is held comfortably, but firmly. If most of the strands are broken, it may become a distressing resting place. The support of the colon is similar. If but a few strands are doing the work, there is sure to be trouble. If we can look upon this as a definite elementary principle in these cases, it is very easy to form a mental picture of why that patient should be neurasthenic, and be disturbed by jolting or exertion.

The principle of the operation we do is to simply bring the ascending colon and hepatic flexure back to the flank and, by suture of the mesocolon to the lumbar fascia, induce fusion in the region where fusion should have been. We do not remove the colon, but reconstruct its attachments by inducing the formation of the new strands where the strands had not formed in the embryo. These patients are relieved of their pains and the neurasthenia disappears the same as in the case of operation for a displaced uterus. The more long standing the neurasthenia, the slower it is to go. Sometimes it will be a couple of years before the patients have regained full vigor and nervous stability.

It is with the hope of coming to some more definite knowledge on one point at a time in this vast subject that I have confined this paper to the cause and the recognition of symptoms.

SACRAL ANESTHESIA*

IRVING PERRILL, S. B., M. D.
CHICAGO

The laity as well as the medical profession now know the advantages of a local over a general anesthetic. This is apparent by patients asking if they can be operated on under a local instead of a general anesthetic. Sacral anesthesia, or blocking of the sacral plexus, for operations about the rectum, perineum or pelvis, is becoming just as popular as local anesthesia for operations in other regions of the body, i. e., hernia, appendicitis, and goiter.

To obtain a perfect anesthesia by sacral injection, one must have a thorough knowledge of the anatomy and malformations of the sacral region, considerable experience in passing the needle into the sacral canal, and one must know how to regulate the amount of fluid injected.

The sacral canal, extending from above downward and following the curve of the sacrum, is triangular in shape. At the lower end, for a distance of an inch or more, the posterior wall of the sacrum is deficient. Normally the laminae of the fifth sacral segment do not coalesce dorsally, thus leaving a gap (the hiatus sacralis) in

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which the sacral canal is exposed. The lateral boundaries at the caudal end of the hiatus sacralis are the two small projections called the cornu sacrale. In thin subjects the outline of the entire hiatus sacralis can be felt very easily, but in the obese it is more difficult to locate. Usually the hiatus sacralis is triangular in shape and varies in size, the apex of the triangle being higher, as a rule, in the male than in the female. It is more or less completely closed by dense ligaments (Lig. Sacrococcygeum posterius profundum; lig. s. posterius superficiale). The small openings in the ligaments serve for the passage of the coccygeal nerves.

The parts of the spinal cord extending into the sacral canal are known as cauda equina and filum terminale. At about the level of the second or third sacral vertebra the dura mater spinalis ends. From there on it forms a direct covering for the filum terminale known as the filum duræ matris spinalis. The dura mater spinalis forms a sheath for the sacral nerves extending from the cord to the ganglia. From there to the intervertebral foramina it fuses with the other membranes of the cord forming a connective tissue sheath for the nerves. The intervertebral foramina are closed about the nerves by extensions from the periosteum. Throughout the sacral canal the dura mater spinalis and filum duræ matris spinalis are separated from the periosteum of the sacrum by fat, connective tissue, venous plexus, and a system of lymph spaces, known as the cavum epidurale. It is into this cavum epidurale that the anesthetic fluid is to be injected for sacral anesthesia.

Injections of colored solution into the cavum epidurale in fifty cadavers showed that the solution bathed the sacral and coccygeal nerves, completely filling the cavum epidurale and extending upwards extra durally to different levels of the cord, according to the amount injected and the position of the pelvis. The injected fluid was found always extra dural, except in one instance in which the needle was inserted too high, penetrating the dural sac. Thompson in his examination of thirty-three sacra reports that he found the average distance from the hiatus sacralis to the dura mater spinalis to be 5.8 cms, the shortest being 4 cms and the longest 7 cms. In two cadavers injected by the author the fluid did not bathe all the nerves, but was confined more or

less to one side of the epidural space, due to thin fibrous bands forming a partial septum in the cavum epidurale.

Anomalies and deformities of the sacrum may exist, so that it may be difficult either to locate the hiatus sacralis or pass the needle into the canal. Occasionally the fourth as well as the fifth sacral laminae fail to coalesce, thus the hiatus sacralis extends much higher than it is normally. Through deficiency in the development of the laminae the sacral canal may be exposed throughout its entire length or to a greater extent than is normally the case. Thompson states that only one out of thirty-three sacra had such a narrow canal as to be doubtful whether a needle could be passed along it. In his series of fifty cadavers the author had no difficulty in locating the hiatus sacralis and passing the needle into the canal. Harris has had two cases in which it was impossible to find an opening into the canal. These cases give a history of injury to the sacral region in early adult life.

Technique. The technique of injecting the sacral canal is the same as is used and described by Harris. The patient lies on the right side with the thighs well flexed, the upper or left thigh flexed more than the right. The surface over the sacral region and about the buttocks is cleaned with alcohol. The anatomic landmarks, such as the last sacral spine and the two cornu sacrale are located. The coccyx is moved backwards and forwards so as to locate the sacro-coccygeal joint. These landmarks form a triangular space of which the fourth sacral spine is the apex; the two cornu sacrale are the lateral boundaries, and the sacro-coccygeal joint is the base. By means of a small hypodermic, preliminary infiltration of the skin and subcutaneous tissues in this triangular space is made with a small amount of the anesthetic solution, so that there will be no pain on passing the larger needle. The larger needle is 10 cm in length, and is re-enforced with a stilet made of hard steel, to prevent the needle from breaking as it is pushed through the dense ligaments. The larger needle is held firmly in the left hand; the thumb pressing against the head of the stilet and the shaft of the needle supported by the index and second fingers of both hands. The point of the large needle is placed in the middle of this triangular space, the needle-point then being usually in the midline

of the body and about three-fourths of an inch above the sacro-coccygeal joint. While holding the needle at an angle of forty-five degrees with the surface of the body it is introduced through the injected skin, subcutaneous tissues and ligaments down to the bony surface, varying the angle of the needle so that it will pass along the bony surface upwards and under the arch of the fourth sacral spine, which is the entrance to the sacral canal. The needle is now introduced into the canal until it meets bony resistance, this resistance being the posterior wall of the sacral canal as it bends forward with the curvature of the sacrum. If the needle enters the canal freely and then meets the resistance of the bony posterior wall as it is introduced further for a distance of four or five cms, then one can feel sure the needle has entered the canal. The needle is withdrawn so that the point is about three cms within the canal. After the stilet is removed one should wait a few seconds to see that no blood or cerebro-spinal fluid escapes from the needle. If the point of the needle has penetrated one of the larger veins or entered the dura sac, then the needle-point should be changed to another location before injecting the anesthetic fluid. When the needle is in the proper place ten cc of the fluid is introduced slowly. The fluid should enter the canal without resistance. The needle is allowed to remain in place, and at the end of a few minutes a test is made to see if there is any anesthesia, which begins at the place where the needle penetrated the skin, and extends slowly downward and forward. The test is made by using a sharp instrument, a needle, to prick the skin in the fold between the buttocks and about the rectum. If anesthesia is beginning to spread downward and forward, then it is certain the fluid was placed in the canal. The position of the needle-point is slightly changed so that the next injection of thirty to forty cc, depending upon the extent of anesthesia desired, may be deposited slowly in another part of the canal, thus insuring the fluid bathing both sides of the plexus. The needle is removed and the patient placed in the dorsal recumbent posture with a small pillow under the hips. In about fifteen to twenty minutes anesthesia is complete.

In some cases thirty-five to forty cc was sufficient to produce complete anesthesia; other cases required forty to fifty cc. The area involved in complete anesthesia extends from the

point of injection forward to the pubic region and laterally onto the buttocks and inner surface of the thighs, known as the saddle-shaped area. Any operation on the anal canal and lower rectum, perineum, vagina, vulva, urethra, cervix, prostate, bladder (cystotomies supra-pubic with infiltration of the abdominal wall) may be performed without any pain.

Solution. The author uses a solution similar to that used by Harris; namely, a 1 per cent solution of either Novocain (Procaïn) or Apothesine, to which is added a 2 per cent solution of calcium chloride and magnesium chloride. Distilled water which has just been sterilized by boiling is used to make the solutions. When the drug crystals have been added the solution is allowed to boil for three minutes. When the solution has cooled below 160 degrees Fahr., one gram of chlorbutanol is added to every 100 cc of the solution. A 2 per cent solution of the calcium chloride and a 2 per cent solution of magnesium chloride in distilled water are made and sterilized, then the chlorbutanol (one gram to every 100 cc) is added as in the Apothesine or Procaïn solution. The solutions are kept separate and mixed in the following manner just before using: To three parts of the Apothesine solution (or Procaïn solution) add one part calcium chloride solution and one-half part magnesium chloride solution. To every ninety cc of this mixture add six drops of adrenalin (fresh adrenalin solution 1 to 1000).

Complete anesthesia should be obtained before operating. When the sensibility of the skin and the sense of pain in the muscles have disappeared, then anesthesia is complete. Dilatation of the sphincter of the rectum will be painful and the relaxation unsatisfactory unless anesthesia is complete. Sense of pain in muscles disappears shortly after all sensibility of the skin is lost. The operator should treat the tissues with the greatest care possible. Anesthesia lasts from two to three hours, and as the patient is not suffering from any pain and is perfectly comfortable without being under the influence of any drug, the operator need be concerned only with the operation. The author, while at a base hospital, was operating on a soldier for hemorrhoids, the type best treated with the clamp and cautery. The patient was in the lithotomy position—feet held up with stirrups. Seeing the smoke from the cauterization ascending between his legs, he

said: "Say, Doc, if I am smoking at that end of my body, why can't I smoke at this end?" It is very common for patients to make remarks during their operations, which show that they are free from pain and under no nervous strain. Under this method the mind remains clear.

Sacral anesthesia has not only been a great help in surgery, but has been a help and a great blessing in obstetrics. The author has used sacral anesthesia in a number of such cases, both normal confinements and in confinements with complications. In August, 1914, the author was called by an obstetrician to block the sacral plexus of a patient who was in labor and was suffering from pulmonary tuberculosis. The patient had been in labor for some time without making any progress. Forty-five cc of a 0.75 per cent solution of novocain was injected into the sacral canal. Anesthesia was complete in twenty-five minutes. The uterine contractions continued, but the patient suffered no pain. The advancement of the head could be felt with the examining hand at each uterine contraction. The obstetrician applied forceps and delivery was affected without any pain except for the temporary discomfort caused by the pulling with the forceps. An extensive laceration of the perineum resulted, which was repaired completely immediately after birth, without any evidence of pain. The pulse was ninety-four per minute and respiration twenty per minute before the sacral injection. Following the delivery and repair of the perineum the pulse was eighty-eight per minute and respirations twenty per minute. The pulse remained at eighty-eight for thirteen hours, then lowered to seventy-two per minute. Anesthesia lasted three and one-half hours. There were no after-effects from the anesthetic. The mother and baby are living today, and the mother is still being treated for t. b. at the dispensary.

The author does not know of any contra-indications to the use of sacral anesthesia. Deformities or anomalies of the sacrum, and adiposity make it very difficult or even impossible at times to locate the hiatus sacralis, but if the needle is in the sacral canal and the proper amount of fluid is injected, anesthesia follows. Cases with functional or organic nervous diseases have been operated on under this method without any trouble or after-effects. No previous medication, such as hypodermic of morphin or any hypnotic drug is given. The presence of consciousness has

proved to be a great advantage rather than a disadvantage.

In ninety-two cases operated on under this method by the author there were no after-effects from the anesthesia. At the time of injection several patients became alarmed and thought they were going to faint, but this feeling lasted only a few minutes. It was not an uncommon affair to hear soldiers who had been operated on for hemorrhoids tell new arrivals in the hospital that they need not be afraid, "for the surgeon cuts your hemorrhoids out without putting you to sleep." It is a great advantage to patients to be operated on under this method, which is devoid of the dangerous and unpleasant complications which so frequently follow the use of a general anesthetic.

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THE MALINGERER AS A MEDICAL AND MEDICO LEGAL PROBLEM.

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Malingers, like the poor, are always with us. In the general practice of medicine in civil life there has been relatively little inclination on the part of the average medical man to give the subject of malingering serious consideration. It is a side issue—and not a worthwhile proposition unless it happens in connection with some litigated personal injury claim, or other medico-legal case, at bar. In some such instances the question of malingering becomes paramount.

To the army medical man, however, the malingeringer early became a vital problem. In the study and solution of this problem there was required just as much scientific achievement, and just as much professional acumen is needed, as in the diagnosis of disease. In ferreting out the malingeringer, the medical man, if he would unmask the feigning of disease, must be familiar with the real disorders of mind and body and all their aberrant manifestations. Not only has he to differentiate the organic from the functional disease—but there is still the more difficult problem of differentiating the functional disorder from a simulated disability. For if it was difficult in some cases to affirm that the soldier or recruit was really and truly ill, and taxed our scientific knowledge to classify his ailment prop-

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erly and diagnose it accurately, how infinitely more difficult was it to establish that he was not only not ill, but malingering. Moreover, in risking the latter diagnosis, if perchance it proved incorrect, the medical officer not only brought opprobrium upon himself, but also cast a slur upon the recruit or soldier whose moral character was thus unjustly assailed.

Following the Surgeon General's office malingerers can be divided into two great groups:

1. "Those who allege, counterfeit, exaggerate, create or conceal disease with full knowledge, intent and responsibility."

2. "Those constitutionally inferior individuals who, throughout their lives, have never been able to meet disagreeable conditions—without complaint, ruse, deceit or evasion."

The second group contains the largenumber.

The aspect of malingering has been greatly changed by the progress of medicine itself. Because of the greater difficulty in "putting it over," the number in group one has been greatly decreased.

The chief service of the medical officer in reference to malingering was in most cases to determine the underlying degree of constitutional inferiority and to frame recommendations so as to ascertain whether this or that malingerer with his especial phase of defectiveness is of the stuff of which soldiers are made. The malingerers that came to our immediate notice were of two great types, roughly designated by Colonel Pearce Bailey, for convenience sake, as the "country type" and the "city type."

By the country type were meant those who malingered so clumsily and awkwardly that the speciousness of their claims of disease or defect were at once apparent to the medical officer. Their claims were grotesquely insupportable, though made with greatest seriousness.

The so-called city malingerer is more astute. He may have attended medical college clinics as an out patient or may have been an habitue of dispensaries to such an extent that he has become familiar with a form of medical jargon and he also makes his complaints less specific. The less specific a complaint is, when made to us by a malingerer, the greater is the difficulty in meeting the individual problem in his case.

The frequent contact in army camp and hospital with conspicuous examples of this sophisticated type of malingerer has been of untold

service in dealing with the occasional malingerers one meets with in personal injury, criminal and other medico-legal cases.

As in army experience so in civil life, the foreign born resorts to malingering more frequently than does the native born American. The proportion is about five to one. This goes hand in hand with the finding that constitutional inferiority is likewise more prevalent among the foreign born. The recruit of Italian birth or descent was by far the most successful of all malingerers. The same holds true in civil life. My experience with individuals confined in the county jail and awaiting trial, who feign insanity as a defense, is that the Italians, especially the Sicilians, are the most persistent and the most difficult of detection in their malingering, and their type of alleged insanity is always one of the bizarre forms. The Italian makes hard work of it, but he sticks to feigned insanity with a persistence worthy of a better cause. Those of other nationalities give up much more readily. The Irishman who feigns insanity usually gives up in less than twenty-four hours, and his assumed insanity has not the slightest semblance to logical structure. Detection of malingering in his case is palpably very easy.

Little malingering to escape service was found among Northern negroes, and what was found among negroes of the South usually disappeared after their uniforms and rations were issued to them. Most of the malingering among the negroes in camp was for the purpose of evading some particular duty, rather than to escape military service in general. To the credit of the Negro soldier, it must also be stated that few, if any, on discharge from service, resorted to malingering to raise their compensation for injuries or increase the benefits to be received from war risk insurance or for rehabilitation.

It is but fair to say that in the earlier stages of the mobilization of our armies gross ignorance was responsible for much malingering. Many from the remote districts within their narrow circle of activity did not know why or whom we were fighting, nor did some of them know war was actually going on. Under such circumstances they apparently resented being taken out of the hum-drum of their simple life to be thrust into an army which in their ignorance they regarded as a sort of punitive institution, and quite naturally resorted to such measures as their prim-

itive minds could devise to escape service—to rid themselves of a new and somewhat distressing situation. It was distinctly a defense reaction. There also would probably have been fewer malingerers of this class were the army to be engaged in fighting wholly within the confines of our own country, rather than entirely overseas. Another fruitful source of malingerers was that not inconsiderable social group that are constitutional evaders. Evasion has become a habit of life with them. They slink from any call in their own community life. They shirk any responsibility placed upon them. To them, in their entire career, duty has never made any successful appeal in either private life or community life. They are ever ready with excuses for not doing their duty in the world. They are social vagrants. They are of the stuff, regardless of social status, of which malingerers are made.

Mental Types of Individuals Who Malingers.

Most authorities divide malingerers, on the basis of mental types, into four great groups:

1. Those of normal mentality.
2. The degenerate.
3. The hysterical.
4. The weak-minded, or insane.

The malingerer of normal mentality is nothing but an ordinary commonplace faker. He may be an habitual shammer—as a boy, he shammed a headache or stomach-ache to get out of going to school, as a man he feigns illness in order to evade ordinary responsibilities of citizenship, so as a soldier he alleged illness to avoid drill or hike. But strange to say, malingerers of sound mind are as a rule the easiest to detect, for they are so clumsy and unskillful in their efforts at deceit. They always lack tenacity in their effort to play the role of a cheat. In the man of sound mind, simulation is irksome—it soon becomes the hardest kind of work. Therefore, with them malingering is short-lived. It is not the result of an ingrained or inborn mental twist, a proclivity to deceit, but is undertaken for some more or less temporary advantage. The sound-minded malingerer always gives up immediately when detected, or as soon as his object is attained. He frankly confesses the game he tried to play, and usually seeks to square himself.

The degenerate who malingerers is of an entirely different species. Though most frequently found in jails and prisons, he was also found in army camps. With him feigning disease in the

army was but a part of his general scheme to revolt against law and order, no matter where he runs up against them. Contrasted with the malingerer of sound mind, he differs materially in at least two respects. Instead of simulating an isolated symptom, as does the sane malingerer, he is more apt to simulate a disease, and he generally selects something with very striking manifestations, such as epilepsy or paralysis. Also, he is not an evanescent short-lived malingerer. He sticks. He constantly, in season and out of season, exhibits persistence, duplicity, and fertility of resource. With him malingering is a well-conceived scheme adhered to at any and all cost. Once committed to a plan of action, he follows it out to the end, without contradicting himself or falling into the traps we set for him. If he is feigning epilepsy he will, without flinching, permit one to knock his ribs, thrust knife points under his nails or blow irritating powders into his eyes. This class of malingerer is the hardest nut we have to crack, and detection is only achieved by prolonged, continuous, skillful observation.

The hysterical malingerer is a much easier problem than the degenerate malingerer. He may be as obstinate as the degenerate, but is less consistent, is more susceptible to suggestion, and his complaints vary greatly from day to day. Their malingering consists chiefly in exaggerating minor symptoms, very inconsequential in and of themselves, rather than in making a train of symptoms entirely out of whole cloth.

The insane or weak-minded malingerer needs no special consideration here.

Classes of Disease Usually Simulated.

In malingering, as in most anything else, the style changes. Medical science has progressed; likewise the fine art of malingering has not stood still. Health columns in the daily papers, with the lists of symptoms of various diseases, the easy access of metropolitan clinics, the alleged popular treatises on medical subjects give the avowed malingerer an opportunity to more or less successfully coach himself in the practice of his wiles. In the British army it has been found that the veteran soldier sometimes instructs the recruit how to outwit the doctor, and in one recent instance written instructions—a sort of handbook of recipes—was discovered. The most frequently employed recipe in this collection seemed to be the one dealing with “pain in the

back." "When you get hurt," reads the sage advice, "say it's your back; the doctors can never get around your back." Likewise in personal injury claims before civil courts, industrial boards, accident insurance companies, pension authorities and other tribunals, "pain in the back," "rotated vertebrae," and the like, are frequently the conspicuous elements in "framed-up" pleas for compensation.

Those disorders which are largely subjective in character are most in demand, because they are most easily simulated and hardest to detect. That is the reason for our experience during mobilization that malingerers met with had a special fancy for "nerve trouble"—neuralgias, sciaticas, lumbago, while "nervous shock" is a phrase they dearly loved to offer the medical examiner. Feigning of deafness and blindness are extremely common, because they do not demand such extreme vigilance or such hard work on the part of the malinger, as do paralyzes or contractures. For the same reason melancholia is apparently more popular with the malingerer in our jails than is acute mania.

You are familiar with the report from the Surgeon General's office as to the order of frequency of the clinical types of malingering. I will not discuss that report here, other than to recall that, based upon the returns from cantonments, recruit depot posts, as well as the United States General Hospitals, the most frequently feigned conditions are first of all Disturbances of Vision. Next comes alleged Disturbances of Hearing, and then in turn, General Medical, General Surgical, Nervous and Mental, Fictitious condition (such as jaundice produced by ingesting small doses of picric acid) and finally, Bed-wetting.

Of any single test in detecting alleged disturbances of vision in malingerers, I have found the Helmholtz malingering test of greatest value in army camp and hospital, just as I have in civil court procedure. Recently in a \$50,000 suit in the Cook County Circuit Court, where loss of vision in one eye was among the injuries claimed by a malingering plaintiff and his lawyer, I was able, by means of the Helmholtz device, to demonstrate clearly and positively to the judge and jury that vision was absolutely normal in both eyes.

Since deceit is the underlying motive in all malingering, every word uttered and every act performed in your presence is indulged in for the

one great purpose of producing in your mind a false conviction. Does he by any mannerism reveal this purpose? What is the basis of your intuition that the civil or military patient before you is a malingerer?

There is usually something in the facial expression that gives him away. This something is generally in and about the eyes. They, more than any other feature of the face, reveal to the medical observer the foxiness, the slyness, the cunning, the craft of the malingerer's deceit. This is always true if he is self-conscious in his malingering. Being uneasy and fearful of detection, his unrest discloses itself in the shifting glance of the eye, the frequent sidewise furtive look about the room through drooping lids. Intense scrutiny on your part disconcerts him, and if he feels he is discovered, to cover up his confusion, he will avert his face.

Much can be gathered from the manner in which he carries himself; his demeanor and deportment on entering your presence is indeed a valuable sign. This, with his gait and station, should be carefully noted. Very often his actions are inconsistent with his subjective complaints. If he can be observed without his knowing it for the time being, so much the better.

The most marked tendency of the malingerer is his constant endeavor to over-act his part. As some one has said, "He sees less than the blind, he hears less than the deaf, he is more crippled than the true paralytic." Like all deceivers, he needs most of all a good memory, but the very process of deception destroys memory power. His memory has been so abused by trying to retain fictitious ideas—things that never happened—that in time, what was originally a good memory, ceases to be trustworthy—is destroyed and fails at critical stages. Carefully observed during the removal of his clothing and in other preparations for the examination there is almost bound to appear some discrepancy between his complaint and his behavior. It is indeed rare that prolonged observation does not reveal some inconsistency, some contradiction, some act of omission or commission that points to fraud. Time is on the side of the medical examiner, so the more protracted the examination, the more prolonged the observation, the more certain is the result. As Shakespeare puts it in "King Lear," "Time shall unfold what plighted cunning hides."

Again, as compared with the really sick individual, the malingerer deals more in glittering generalities in the statement of his complaints. If it be pain of which he complains it is usually diffuse and poorly localized. On one point he persists and sticks most tenaciously, viz.: The pain is most intense—not only is it severe, but never remits, and has not been influenced by treatment. Now we all know that there are a few diseases in which pain is constant, unremitting. Pain almost never occurs without exacerbations and remission—there are always times of surcease and yielding to treatment. The honest patient's account fits in with the natural habits of the disease, he has good periods and bad spells, one day he is better, another day worse. But the malingerer goes on with a monotonous sameness, repeating the same old jargon of complaints and symptoms—never better, always worse, and no treatment ever alleviates, and, to make his story stronger, will even effect symptoms entirely foreign to the disease of which he claims to be the victim.

It may be necessary to caution ourselves as to the manner in which we approach the suspected malingerer. If we begin by being rough or brusque we defeat ourselves. It is the examiner's business to allay suspicion and not to excite it. While the examiner may glean something from the face of the claimant, he must be careful that his own countenance does not betray his suspicion. The face of the examiner should be as impassive as possible, for while he is observing, he is also being observed.

All physical examinations should be complete and thorough, for malingering and true disease may often co-exist. One who assumes a neuralgia, or a wandering, indefinite, unlocalizable pain may perchance have also some form of real gastro-enteric disease or a true cardiac lesion. It would be nothing short of calamity, if after satisfactorily demonstrating the baselessness of the pain complained of, one proceeds to deal with him accordingly as a malingerer pure and simple without having detected an organic disease that really unfits.

One of the most practical points of difference between hysteria and malingering I have found to be, that the hysteric always welcomes examination, while the malingerer dreads it. The effect of suggestion is another point of differentiation. Since hysterical manifestations, whether

sensory or motor, are aroused by suggestion, they can, in the main, be cured by suggestion. I also found in United States General Hospital No. 30 at Plattsburg that on the wards you could gain the confidence of the hysteria patients, and they, without exception, expressed a desire to be cured. The opposite seemed to be true of the malingerer. I cannot agree with those who state, that what some describe as malingering and others as hysteria, are one and the same thing, the difference being only one of viewpoint.

It is readily apparent that malingering does not lend itself to as close analysis as does disease of more definite symptomatology. Groups of cases do not present sharply defined lines of cleavage or distinctness of demarcation. There are no "cardinal symptoms" in malingering. There is no uniformity in kind other than in the general underlying substrate which reveals varying degrees of inferiority in individual cases. This very indefiniteness and overlapping make deductions extremely difficult. But I believe that the following, among others, are some conclusions that are justified from even this brief and somewhat general presentation.

1. Malingering is a form of mental reaction exhibited chiefly by those of inferior mental make-up.

2. Our problem is to determine the degree of mental inferiority as in any other mental case. We have not accomplished our purpose as medical men if we only go far enough to satisfy ourselves of the truth or falsity of the complaints without diagnosing the patient's mental capacity and stability.

3. Many individuals are so poorly organized mentally that under stress they sink to a mental level lower than that which they customarily occupy in the uneventful routine course of their lives. Having sunk to this level through stress, they resort to means of defense characteristic of that lower level.

4. Recognition of malingering in a definite case is not so much a problem of detection as it is of understanding the individual. This requires accuracy in diagnosis, knowledge of human nature, thorough comprehension of the facts and forces that have been operating in a given individual's life prior to the examination.

5. The greatest caution should be exercised in pronouncing any given individual a malingerer.

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State society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

Send original articles and all communications relating to advertisements to Dr. Charles J. Whalen, Editor, 4647 Dover Street, Chicago.

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Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

SEPTEMBER, 1920

Editorial

WHY STUDY MEDICINE?

At present there is a widespread agitation for letting down the bars for medical education. There is also being propagandized a studied scheme on the part of several extra health agen-

cies seeking to obtain circuitously what they cannot obtain legally, namely, the authority to practice universal first aid, which includes minor surgery and really the general practice of medicine on the ground that it would supplement the work of the physicians and take from them the burden of caring for unimportant injuries and looking after the sick, so as to release the physician's services for more serious cases.

We admit that the present-day standards of pre-medical education has lengthened the time and increased the cost of medical training, thus curtailing to a large extent the yearly attendance at the medical colleges. In 1904 there were 28,142 students attending the various medical colleges of the United States, this being the largest number in any year during the period of 1880-1919. The total number of medical students in the schools for the year ending June, 1919, excluding pre-medical, special and post-graduate students, was 13,052. There was a decrease in 1919 of 578 below that of 1918.

The high standard of efficiency established through the reclassification of medical colleges has caused the closing of many of the smaller and more poorly equipped ones. In 1906 there were 162 medical colleges in the United States; in 1919 there were only eighty-five recognized medical colleges. In 1903 there were 5,698 graduates from all medical colleges, one graduate for every 14,020 of population. This number has gradually declined, in spite of the increase in population, until in 1919 there were only 2,656 graduates, a decrease of fourteen below that of 1918—one graduate for each 40,230 people.

While the population of the country is increasing and the number of medical students as it has been shown is decreasing at a disproportionate rate, nevertheless as we have shown in the November, 1919, issue of the ILLINOIS MEDICAL JOURNAL, there has been a material decrease in the amount of disability in this country and that because of this fact there has been a material decrease in the demand of physicians.

Here are a few of many diseases and conditions that might be enumerated and as showing a decrease in morbidity and a lessening demand for medical men:

Diphtheria antitoxin has materially reduced sickness and mortality.

Typhoid fever, which was at one time a scourge, has reached the vanishing point.

Destruction of the mosquito has prevented malaria and yellow fever.

The control of plague is now an accomplished fact.

Improvement in the milk and water supply of cities has materially reduced morbidity from intestinal diseases.

By early recognition and hospitalization, tuberculosis morbidity is being materially reduced, due to the world-wide campaign of prevention.

Hookworm disease is now readily curable.

Puerperal fever is today as rare as it was formerly common.

Typhus fever no longer exists in America.

Scientific midwifery by dispensary physicians teaching dependence on state support.

Visiting nurses for ordinary sickness, thus helping families to self-medication.

Tenement house inspection, preventing diseases due to overcrowding.

The Pure Food and Drug Law.

School inspection, helping to eliminate infection.

The regulation and suppression of alcohol consumption.

The fashion for fresh air and outdoor sleeping.

The disposition to work along lines of prevention rather than cure.

Another factor is, that the economic side of medicine has reached the lowest ebb in the world's history. The situation has grown so serious that young men cannot afford to take up the study of medicine in view of the fact that the commercial world is much more alluring and is much more remunerative even after a doctor has spent an ordinary lifetime to equip himself for medical practice.

On any street corner or any public place you can hear young men ask each other what is the use of struggling through school to fit yourself for a profession when you can get bigger wages in many forms of inexpert labor than the average professional income.

It has been authoritatively stated that the average annual income of the physicians of the United States is \$750. Let us be liberal and say three times seven fifty or \$2,250. In commenting upon this we would like to ask what is the use of equipping oneself in order to follow a profession where the income derived from following the same is materially less than the day labor wages of non-skilled workmen.

In Chicago carpenters are making five or six thousand dollars a year; bricklayers the same, ice cream delivery men forty-five hundred, and there are large groups of unskilled workers who are

making over three thousand a year and are asking more. All this with an eight-hour day, five and a half days a week; while the physician in general practice is on call night and day, 365 days in the year.

Milk drivers in Chicago receive a guaranteed wage of thirty-five dollars a week or \$1,825 a year with commissions running this wage up to sixty or sixty-five dollars a week or thirty-three hundred dollars per annum. No education and little brains required; no pre-medical and medical education to slave for. No preliminary outlay or expenditure of ten thousand dollars for an education, to say nothing of the loss of the money (\$1,800 to \$3,000 per year) that could be earned between grammar school graduation [at thirteen or fourteen] and twenty-eight years of age, the minimum age when a boy can be equipped to practice medicine.

A discouraging sign of the times is that every time a physician speaks of the monetary side of his profession some sapient moralist finds it convenient to give out an interview (which is usually heralded with loud acclaim) to the effect that the practice of medicine is not a money-making profession, and that the doctor must not commercialize his calling.

The remark is true, and yet superfluous; no physician has any illusions about the money-making possibilities of his calling, for the community pays considerably less on the average to the physician who cares for its children and other sick and disabled population than it does to the men who deliver its milk supply. Under present conditions no youth with financial aspirations would attempt to fit himself for the practice of medicine if he could get a chance to lay brick while the plumber, the moulder and the skilled workmen in Henry Ford's Tin Lizzie factory get wages that would make the average physician green with envy.

A fact overlooked by the dream book moralist and strange as it may seem to them, most doctors, the same as other natural beings, marry and become fathers of families. As such they should, and will, feel a certain responsibility for the care and upbringing of their children. When they are confronted with the choice between starvation incomes in the practice of medicine and liberal incomes in commercial work, the prospective

wife and kiddies become a most potent factor in discouraging youth from the study of medicine. The prospective doctor will ask himself: "Have I any right to deprive my family of the advantages which a decent income would bring?" and the answer to such is not hard to get. Medicine should not have to compete with the commercial world in order to lure young men into taking up this noble calling, but the community should be willing to pay a remuneration that will relieve doctors from the grosser forms of financial worry and permit them to give their whole minds and hearts to their task.

It takes a great deal of time and certainly a fortune to equip a young man for the practice of medicine under present-day conditions. The tradesman is paid wages while learning his advance trade, but the prospective doctor pays in both time and money. A boy can quit school at the end of the grammar grade with enough learning to enable him to get on in skilled labor and a few years longer study will equip him sufficiently for the commercial world, but the prospective doctor must go to school until he is 28 years of age or, in other words, he must put in from 10 to 14 years of extra study with the same number of years under a ponderous expense from which the boy who chooses the commercial life is exempt.

It ought to be perfectly clear then that men and women will not undergo the years and extra expense unless they have some special inducement to do so. In times past society offered the physician a bonus of social and economic advantages, but at the present time, the economic advantage has disappeared, indeed, it has been replaced by a decided handicap and that is an alarming situation to any one who thinks ahead.

The wages paid for unprofessional men in the commercial world may be justified. This question is not an issue with us. The point that we wish to emphasize is that the inducement to individuals to fit themselves for the practice of medicine or, for that matter, for any of the learned professions, is gone. It must be restored or the next generation will suffer.

Here is a problem which deserves the most careful thought and study that can be given it. It cannot be solved by theorists reading dream books. It cannot be ignored without very serious consequences to the coming generations.

UNIONIZING THE MEDICAL PROFESSION—NEVER.

ARE PHYSICIANS NOT A PART OF THE AGE IN WHICH THEY LIVE? WHY THE PROFESSION SHOULD ORGANIZE.

The article "Unionizing the Medical Profession—Never!" in a recent issue of the *Manufacturers' News*, and the answer to the same by Dr. Thomas P. Foley, chairman of the Contract Practice Committee of the Chicago Medical Society, should be read by every physician in the state. We have repeatedly called attention to the fact that in nearly every instance where a physician succeeds in getting placed on the pay rolls of a corporation, municipality, state or government, he automatically develops a warped viewpoint of the rights and necessities of his fellow doctors and is always ready to kick from under him the ladder by which he climbed to fame and fortune.

UNIONIZING THE MEDICAL PROFESSION—NEVER!

LEROY P. KUHN, M.D.

In a recent issue of *Manufacturers' News* I noticed a paragraph on "Chicago Doctors Plan Protective Union." I am quite familiar with some of the Chicago West and Northwest Sides medical propaganda, which has lately gone into print in some of our medical bulletins, with reference to why the medical profession should organize. I thought we were organized and I believe we are organized. Not, however, as a "union" or a "business association," but as a noble profession.

Soon after my graduation from the University of Illinois, I joined the Livingston County Medical Society, Illinois State Medical Society and American Medical Association. In 1912, my Livingston county membership was transferred to the Chicago Medical Society. These different medical bodies stand for the highest ideals possible in the profession, as is evidenced by the following extract from the constitution and by-laws of the Chicago Medical Society:

"The objects of this society are to promote the art and science of medicine. Contributing to this end it shall endeavor to bring into one organization the physicians of Cook county, so that, by frequent meetings and full and frank interchange of views, they may secure such intelligent unity and harmony in every phase of their labor as will elevate and make effective opinions of the profession in all *scientific, legislative, public health, and material and social affairs*; to encourage research; to *safeguard the material interests of its members*; to settle disputes and adjust the ethical relations of its members; and, with

other county societies, to form the Illinois State Medical Society, and, through it, with other state societies, to form and maintain the American Medical Association."

MIXING IN POLITICS NOT ETHICAL

Nothing is found anywhere in the constitution and by-laws about organization for profit, or to whip folks into line to pay higher fees. In fact, the laborer is worthy of his hire, and the fee charged should be according to the ability of the patient to pay. This has been the basis of medical "fees" since the time of Hippocrates and Galen and will remain so as long as medical men and women realize they are in a profession and not a business.

If Ian MacLaren, who wrote that beautiful story about Dr. MacLure in "Beside the Bonnie Brier Bush," describing the character of the medical practitioner as he struggles through the raging ford to save the life of Tammas Mitchell's wife, could come to life long enough to observe some of the suggestions printed by a so-called contract practice committee of the Chicago Medical Society, I am afraid he would say, "Alas! they are falling from a profession to a business, drifting from the æsthetic and professional to the materialistic."

Today is caring less for events, but more for the man. Things pass quickly; man stays. The democracy of our age holds fast to men and women. Literature is turning from congested movements to men. The epic of the individual takes the place of the epic of the event. Just why a body of noble professional men should waste time and degrade itself to organize into a political machine, for the purpose of mixing with union labor or politicians on matters not scientific and in no way promoting the health of a community, is more than I am able to comprehend. True, we should be given opportunity, as during the past war, when occasion demands, to advise and counsel on medical subjects. The more we mix with politicians the farther we will have to go and the deeper our souls will be led into their ways. Does any medical man want to spend \$7,500 cash and six years' hard study to learn how to unionize and philosophize on political subjects, which our modern aldermen are able to take care of without even a high school education, and hardly able to speak the English language.

The medical profession is not the "white man's burden." We have opportunity to accept or reject. We were not forced to study medicine and we are not forced to continue the practice of medicine.

If degrading political organizations wish laws upon us without ascertaining whether they are in any way agreeable to us, then let those bodies carry out the details of such laws. If we are not satisfied with the laws made by our representatives in state legislatures, and if such bodies choose to make these laws, ignorant of our wishes, then I would say we are not our brother's keeper in any way that does not pertain to scientific medicine or surgery.

UNIONISM OPPOSED TO HIGHER IDEALS

The state does not exist for the good of the individual, rather the individual exists for the good of the state. The individual created or made the state possible; naturally the state is directed by the individual, in a country like the United States. When the state assumes all authority and determines itself master of those who made it possible, then we have an autocracy.

When Lloyd George was framing his bill for compulsory health insurance, he listened to arguments from sociologists, employers, officers of labor unions, employes, legislators, representatives of "friendly societies," etc., but never until the bill was finished did he consult with members of the British Medical Association. An issue of such vital importance to the medical profession should naturally interest and include the best thought and talent of the medical profession. Therefore, I hold that medical men should be ready and willing, at all times, to counsel and advise the state on all subjects pertaining to scientific medicine and surgery and to the physical health and well-being of a community, but not organize into a combination for the one purpose of bringing pressure on any legislature or class of people. Put the profession on a business basis, and minute competition is destroyed and science suffers.

If any medical man ever believes he can spend some time in politics, some in organization work, some in affairs pertaining to the welfare of insurance companies and still practice medicine or surgery and keep up with either, he certainly will develop into a superman. Paul said, "this one thing I do"; and he did it, as no other man has ever done it since his time.

During the past year, in the weekly bulletins of the Chicago Medical Society, I have noticed half-page cuts of suggestions why the medical profession should organize, signed by the chairman of the "contract practice committee." To me, the reasons given for such a type of further organization are offensive, irrelevant and do not in any way promote the ideals a medical man should have uppermost in his mind. Every medical organization should hold first and foremost the promotion and upbuilding of scientific subjects for the betterment of humanity. This is the main thought in the object of the Society of Industrial Medicine and Surgery, which is being organized by a committee of industrial surgeons of Chicago and which, we hope, will become affiliated with the Chicago Medical Society.—*Manufacturers' News.*

GUBERNATORIAL CANDIDATES AND THE MEDICAL PROFESSION

Just as we were closing forms for this issue we received the following letter from Mr. Oglesby, asking that it be published in the ILLINOIS MEDICAL JOURNAL.

In the March issue of the JOURNAL we pub-

lished an editorial on "Presidential Candidates and the Medical Profession." In the June issue, and on several other occasions, we have expressed ourselves along similar lines. Indeed, for years we have been working consistently to bring about a proper recognition of the medical profession as a civic influence of the first magnitude. There are 25,000 doctors, dentists and druggists in Illinois. He is a poor medical man who has not at least ten voters who believe in him. We are pleased to note that, at last, aspirants for office have realized the possible influence of the medical profession as a civic factor. We are sorry that other candidates for the high offices have not seen fit to send us for publication their platform on things medical.

JOHN G. OGLESBY

LIEUTENANT-GOVERNOR

CANDIDATE FOR THE REPUBLICAN NOMINATION

FOR GOVERNOR

PRIMARY

Wednesday, September 15, 1920

Springfield, Illinois, Sept. 6, 1920.

To the Medical Profession of Illinois:

Realizing the keen interest the medical profession takes in all matters affecting the health welfare of Illinois, I take this opportunity to state my position relative thereto, presupposing that I shall be nominated at the Primaries, September 15th, and elected Governor in the November elections.

First: The medical profession is assured that, under my administration, it will receive a square deal and be shown the high respect and consideration due this noble calling;

Second: Good health being the greatest asset of the people, it must be assured and safeguarded by co-operation between the medical profession, the Department of Health, the Department of Registration and Education, and the Department of Public Welfare, which has jurisdiction over the charitable institutions of the State;

Third: I believe in proper compensation for all who devote their services to protecting the health of the community;

Fourth: I believe in democracy in medicine and am opposed to any medical theory which is detrimental to the health welfare of the public;

Fifth: I believe in State home rule, as opposed to any attempt by the Federal government to exercise public health police functions and duties properly falling within the police powers of the State;

Sixth: I am opposed to any attempt by the Federal government to extend war-time powers to peace conditions.

As one who is interested, as your profession is, in good government for Illinois, may I not receive your active support at the Primaries on September 15th?

Sincerely yours,

JOHN G. OGLESBY.

WHY THE MEDICAL PROFESSION SHOULD ORGANIZE

Organized medicine is represented in Chicago and Cook county by the Chicago Medical Society. Among other objects, this society is organized "to safeguard the material interests of its members."

It is readily recognized that, with a membership of thirty-five hundred, the only practical manner of transacting the necessary business of the Society is through the various Committees. These Committees are appointed by the President of the Society or elected by the Council and are responsible and accountable for their actions to the central governing body of the Society—the Council. One of the authorized Committees of the Society is the Contract Practice Committee. The work of this particular Committee is "to promote the material interests of the members of the Chicago Medical Society" engaged in contract practice, whether whole or part time.

Early in the present year the attention of this Committee was directed to the fact that it was a practice with some insurance companies to authorize members of the Society to care for injured workmen in accident cases, but, when a bill was rendered for the services, it was returned with a statement that the usual fees paid were from thirty to fifty per cent less, and that the physician could accept the amount offered or charge his services to expense.

Through The Official Bulletin of the Chicago Medical Society, the Contract Practice Committee announced that such information had come to it. The Committee requested authentic instances, stating no attention would be paid to gossip, rumor or scandal, and that every case presented should be specific and in writing.

When the letters began to come, each was considered on its merits. Some were referred to the attorney of the Chicago Medical Society with instructions to sue. At times the Committee wrote the insurance company involved, stating when the case would be considered, and requesting that a representative of the company be present. In no instance did one of the companies have the courage or the courtesy even to reply. Some of the claims presented were considered unfair by the Committee and physicians presenting such claims were frankly told they were unfair and that the Committee would not back them.

At each monthly meeting of the Council, the reports of the activities of this Committee were presented, and the reports were adopted as read. The activities of the Committee were also presented to the members of the Society through The Official Bulletin, published weekly.

In an effort to better "the material interests" of members engaged in industrial medicine and surgery, the Contract Practice Committee appointed a sub-committee to organize these physicians in an affiliated society, where their special problems could be considered. When this Society is organized, the report of the sub-committee will be received by the Contract Practice Committee, and through that Committee,

presented to the Council for its consideration and endorsement.

With the above as a preliminary announcement of the activities of the Contract Practice Committee, the Chairman of the Committee directs the attention of members of the Society to an article published by Dr. Leroy P. Kuhn, Chief Surgeon, Illinois Manufacturers' Casualty Association, appearing in the August 12th (1920) issue of Manufacturers' News, and also published in The Official Bulletin of this issue.

Any thinking physician or surgeon of today knows and realizes that the practice of medicine is not only the practice of a noble profession, but also the conduction of a business. To practice medicine it is necessary to live. To live it is essential to be provided with the so-called necessities of life. To secure the necessities of life it is necessary that the income exceed the output. To have an income it is imperative that a just compensation be paid for services rendered to others.

Every physician, except perhaps the æsthetic representatives of Hippocrates and Galen, realizes that, on the first of the month, it is necessary for him to meet certain expenses in the way of rent, heat and light. He knows that, unless these expenses are met, that these commodities will be shut off, and, without the commodities, no matter how æsthetic or high-minded he may be, his opportunity for serving mankind will stop.

If our good friend, Doctor MacLure, on his way home after his struggle through the raging flood to save Tammas Mitchell's wife, had stopped, let us imagine, at a service station of the Standard Oil Company, for gasoline and oil, he would learn that, without regard for his beautiful character, the attendant would expect the transaction to be one of cash.

The chances are that the doctor would soon become a convert to "the suggestions printed by a so-called contract practice committee of the Chicago Medical Society" and would say, "Alas! I must become a bit more materialistic, at least where insurance companies are concerned, or the auto will be without gas."

It is sad that some of the rubber spines in the profession cannot comprehend "why a body of noble professional men should waste time and degrade itself to organize into a political machine" which, in time, will finally impress upon insurance companies that "a decent fee for efficient service" is what they will have to pay physicians who do their work. It is pathetic for the insurance companies to feel that they will be dealing with a compact organization of thirty-five hundred, instead of each physician as an individual. It is hard "to comprehend," from the vision of the insurance companies, the degradation that will come with the physician setting his fee, and not have some non-medical adjuster tell him what he will get.

But the hardest thing "to comprehend" is the emasculation of one of our noble profession to the extent of giving a living example of the Victrola advertise-

ment of "His Master's Voice" in the clamorous effort, through subterfuge and so-called æstheticism, in attempting to befuddle the issue that practitioners of medicine are not human; that the instincts of self-preservation are not theirs, and that they are not a part of the age in which they live.

The Contract Price Committee contends, without an apology or a salaam, that it is far better for a "medical man to spend \$7,500 and six years' hard study to learn how to unionize and philosophize on political subjects" than to spend the same amount of money and time to become qualified to practice medicine and receive the following reply to a modest charge of \$10 for caring for a fractured rib:

Maryland Casualty Company,
John T. Stone, President.
Home Office, Baltimore.
Chicago Claim Division,
1021 Insurance Exchange,
175 W. Jackson Blvd.

Chicago, March 17, 1920.

Claim No. 20-989-C-12521-Z.

Assured. Illinois Vinegar Mfg. Co.

Injured. C. Mueller.

Dr. E. Keating, 2801 Logan Blvd., Chicago.

Dear Doctor: Attached hereto is a draft for \$3.00 in full payment for surgical services rendered in connection with the above captioned claim.

Yours very truly,

E. A. HULBURD, Manager.

For the edification of anyone from Missouri or a doubting Thomas, the original is on file with the Contract Practice Committee.

Perhaps even the mildest of medical men would philosophize on materialistic matters if, "after spending \$7,500 and six years' hard study," he had removed a piece of steel imbedded in the eye, and rendered a bill for \$5, only to receive the following evidence of regard for his high calling from an insurance company.

Sherman & Ellis Service.
Liability Interinsurance.
Attorneys and Managers.
General Offices: 11 South La Salle St.
Telephone: Majestic 8510.

Chicago, Ill., July 17, 1920.

60625—Re: M. Higgeston vs. Reuter Bros.

Dr. B. D. Satek, 5141 South Lincoln St.,
Chicago, Ill.

Dear Doctor: Your bill to Reuter Bros. for \$5.00 for removing foreign body is received. The usual schedule for work of this kind is \$2.00. It may be this was an unusual case and justified a \$5.00 charge. However, we would be glad to get your advice on it, as to whether this was other than the ordinary foreign body to be removed.

Yours very truly,

Fac-SC
SHERMAN & ELLIS SERVICE.

Or perhaps the following might interest our æsthetic physician:

Illinois Manufacturers' Casualty Association.

August 17, 1920.

Claim No. 39476. Svend Aage Jonsson.

Dr. Bernard S. Maloy, 4000 West North Ave., Chicago.

Dear Doctor: Referring to your bill in the above case. . . . We believe industrial surgeons in Chicago have made a rate of about \$1.50 per dressing; at least, all bills presented to us do not go over that much. . . .

Yours very truly,

ILLINOIS MANUFACTURERS'
CASUALTY ASSOCIATION,

Per C. T. JAYCOX.

On practically the same day, the versatile Mr. Jaycox wrote another physician, complaining of a charge of \$1.50 per dressing, and stating the "usual fee was one dollar." Space limits the examples on file with the Contract Practice Committee of letters sent by insurance companies to physicians.

"If degrading political organizations wish laws upon us without ascertaining whether they are in any way agreeable to us then let those bodies carry out the details of such laws." So then, noble medical men, rest supine until State Compulsory Health Insurance is a law and see "how those bodies will carry out its details." While "we are not our brothers' keepers in any way that does not pertain to scientific medicine or surgery," we all notice how the packing industry, the clothing manufacturers, the producers of coal, the insurance companies, and the producers of every necessity are "their brothers' keepers" in their particular lines.

Could anyone, without a complete "marbleization" above the shoulders, presents a poorer argument against the economic and material organization of the medical profession than the following:

"When Lloyd George was framing his bill for compulsory health insurance, he listened to arguments from sociologists, employers, officers of labor unions, employes, legislators, representatives of 'friendly societies,' etc., but never until the bill was finished did he consult with members of the British Medical Association."

Put "the medical profession on a business basis" and you will win the respect and admiration of the world. Get the medical profession off the wild catters' lists of "widows, orphans and physicians." Do good scientific work and get the recompense that your work should have.

A suggestion *why the medical profession should organize*, quoting the United States Department of Labor statistics, showing that, in fourteen principal cities of the United States, the cost of commodities has increased 96 per cent from 1914 to 1919, may be "irrelevant" to the Chief Surgeon of the Illinois Manufacturers' Casualty Association, whose salary perhaps has kept step with the increased cost of living. But it is not irrelevant to the man in general practice.

Certainly "it is offensive" to insurance companies to read one of their authentic letters, attempting to cut a physician's bill about forty per cent, presented to the medical profession as a reason *why the medical profession should organize*. This information was so "offensive" to one company that the Chicago manager went to a physician and attempted to have him repudiate the letter after it was published in The Official Bulletin of the Chicago Medical Society.

Medical men "have ideals and hold foremost the promotion and upholding of scientific subjects," but surely medical men are human; certainly they and their families are entitled to just and adequate compensation. To "aid in the betterment of humanity" requires "vigorous health," which necessitates food and warmth and clothing.

One "medical man who spends some time in politics, some in organization work, some in affairs pertaining to *uneasiness* of insurance companies and still practices scientific medicine, with a spare hour to teach in a Class A medical school, occasionally finds time to read wise sayings of wise men:

"How happy is he born or taught,
Who serveth not another's will,
Whose armor is his honest thought,
And simple truth his utmost skill."

CONTRACT PRACTICE COMMITTEE,
THOMAS P. FOLEY, *Chairman*.

WHAT THE FEDERAL GOVERNMENT FINANCES THE FEDERAL GOVERNMENT CONTROLS

Co-operation with the federal government with the respective states, means in practice that the federal government dictates and the states obey, or get no money.

The federal government is attempting to extend war-time powers to peace conditions and inasmuch as this cannot be done by constitutional authority, the army of bureaucratic chieftains and political milkmaids who make up the army of swivel chair occupants in Washington are hoping to accomplish by chicanery what they are unable to do legally. We hope the legislatures of the respective states are wise enough to see that in appropriating for the co-operative purposes mentioned they are simply undermining the stability of their own state.

Two measures of vital importance to the medical profession are being agitated in Washington. The first is the attempt by the National Congress to invade the authority of the states by the introduction of bills authorizing various departments of the federal government to exercise public

health functions and duties properly belonging to the states.

The second is what is known as the Smith-Towner Bill for the establishment of federal dictatorship over the school system of the respective states. The objections to the former are well set forth in a resolution passed by the Illinois State Medical Society held at Rockford, Ill., May, 1920, as follows:

WHEREAS, There is a growing tendency in our National Congress to invade the authority of the states by the introduction of bills authorizing various departments of the Federal Government to exercise public health functions and duties properly belonging to the states, and

WHEREAS, There is an equally dangerous tendency in our own state towards the assumption by voluntary and irresponsible extra government agencies of powers and functions properly belonging to the legally constituted Health authorities, therefore, be it

Resolved, That the Illinois Medical Society disapproves of any action whereby the Federal government attempts to exercise authority over health matters in any state except insofar as questions of National or interstate importances are involved and that we urge that the regulations of all State Health matters be under the direction of the legally constituted Health authorities of the state as the representative of its citizens in health conservation, operation, and be it further

Resolved, That we condemn the principle of Federal State aid as pernicious and dangerous; that it is an encroachment on the functions of the state and an invasion of State authority tending to the demoralization of State Public Health work, rather than its development.

The Smith-Towner bill attempts to make believe that its purpose is to establish federal co-operation with the States, and federal stimulation in the matter of education. Any person with a grain of common sense and a half grain of reasoning ability knows perfectly well that what the federal government finances the federal government controls, to the crossing or dotting of the last "t" or "i."

Note what two ex-speakers of the house of representatives and others say about the Smith-Towner bill. Ex-Speaker Joe Cannon is viewing with alarm the persistent efforts to intrude the federal government into concerns over which the States alone have jurisdiction. In discussing the federal vocational rehabilitation bill, another co-operative scheme, and the most socialistic piece of legislation ever brought to Washington, on October 16th, he said:

"During this congress, you are to bring in a bill here, to make the Commissioner of Education a Cabinet member. God knows, if I had the power, I would have fewer Cabinet positions than now, because they could be administered without duplication and at far less expense, and perform their duties by giving service more promptly than is now given. I

agree with Mr. Speaker Clark that we have Cabinet officers enough. I am opposed to the creation of any more. Yet, I am informed that the next step is to create a Department of Education. The States are caring for education. A Department of Education, located in Washington to boss the education of the whole country, would be injurious to education in the States.

"Let us be honest with each other. When you read this bill through (Vocational Rehabilitation Bill) read it clear through, and you will find that the Commissioner of Education, with his associates, living in Washington—you will find it so drawn that the whole thing is to be controlled and managed from Washington.

"You had better leave these matters of caring for the citizens in the various States, to the States." (*Congressional Record*, October 21, p. 7728.)

And this from Ex-Speaker Clark:

"Every man in this house who has three ideas above a Hottentot is devoting his thought to cutting down tax bills instead of increasing them; and pursuing the principle that it is not the duty of the federal government to do for the States and for the citizens things which they should do for themselves.

"Any man in this country, who will allow his children to grow up bowlegged, ought to be put in the penitentiary or the insane asylum. It is easy to cure, and yet walking down the street yesterday I saw a man, and the biggest hog in the State of Missouri could have run between his legs and never touched them at all. Bowlegs should be straightened, but I humbly submit that it is not Uncle Sam's duty.

"Why do not parents take care of that thing, instead of coming to the congress of the United States to have bowlegs and other afflictions like that cured? We have got to cut down these appropriation bills. Oh, they say, it will only cost a million; but that is a starter, that is the camel's nose under the tent, and you all know it—any of you that are fit to be here, know it. There is a bill coming up that proposes to make a Cabinet member of the Commissioner of Education, a Secretary of Education, and I am against it. The first thing you know, they will have as many employes down there in that Bureau of Education as they have in the War Risk Bureau, with its 14,000 employes jostling each other around in each other's way.

"Whenever that bill comes in here to make a useless department out of the Bureau of Education, I am against it, and I will use every parliamentary means at my disposal to beat it. The United States government cannot do everything; it is utterly impossible. The best thing for congress to do would be to pass a resolution, directed to the States, advising them to resume their governmental functions (applause) and let us alone. The milk in this cocoanut is to create a lot of nice new jobs." (*Congressional Record*, October 11, p. 7141.)

And this from Mr. Echols, of West Virginia. On October 17th he said:

"If some department should come to Congress, and ask an appropriation to construct a cold-storage plant in Hades or to regulate the affairs of paradise, . . . I am inclined to the opinion that it would be looked upon with some favor, providing such appropriation could be made the excuse for placing a few more employes on the Federal payroll. It occurs to me that with the Government running three and a half billion dollars short for the year, it is time to stop appropriations of money on the mere ground that they may be desirable, and might possibly, in some remote way, reduce the high cost of living, or help some cripple whom the Government is under no obligation whatever to take care of." (*Congressional Record*, October 20, p. 7657.)

In speaking of the Vocational Rehabilitation bill, the proponents on the floor of the House claimed that this, like the Smith-Towner bill, would in no sense interfere with the right of the State to conduct courses as it saw fit. Note this conversation that took place on the floor October 14th:

"Mr. Fess . . . I do not think this Congress wants to allow the Federal Government to step over into the States, and dictate what shall be done in the States. This would be done by the State Boards on approval of the Federal Government.

"Mr. Johnson of Washington: It (the bill) says that it shall be under a general plan of supervision determined by the Federal Board, and it is either that or nothing, probably. If that is not the case, I should like to know.

"Mr. Fess: No money will go from the Federal Treasury, unless the use of it is to be approved by the Federal Board, and this is by a general plan or provision.

"Mr. Johnson of Washington: *Then there will be no escape from what the Federal Board proposes; and we have been through that before.*

"Mr. Fess: The Federal Board will probably do something about the manner in which the administration of the appropriation in the State will take place, but it is wholly a matter of the States, with the approval of the Federal Board.

"Mr. Johnson of Washington: *The Federal Board telling the State what to do.* (*Congressional Record*, October 14, p. 7272.)

"In the course of an earlier debate, this undeniable fact of Federal domination was brought out in the following colloquy:

"Mr. Smith of Michigan: Does the State or the Federal Board prescribe the training that shall be given?

"Mr. Fess: It must be done upon their approval.

"Mr. Smith of Michigan: The approval of the Federal Board or of the State Board?

"Mr. Fess: *Upon the approval of the Federal Board.* (*Congressional Record*, October 9, p. 7045.)

"And this really sums up all that is to be said on the subject. 'Cooperation of the Federal Government' with the respective States, means in practice that the Federal Government dictates and the States obey, or get no money."

And this final contribution from Hon. John MacCrane of New York:

"I will not permit my vote on this bill to be used in the future as a bludgeon to batter me into support of a bill federalizing the educational systems of the entire nation. . . . No such argument, however, [stimulation, etc.] can be used for the adoption of any plan to centralize educational control in Washington. With the first settlers on this continent came the schoolmaster, and with the first clearing of the forest a place was provided for the education of childhood. Throughout our colonial history and throughout the formative period of our national life until today, appropriations for education have gone forward. We have our public schools and our private schools. Hundreds of millions of dollars are spent annually by municipal and State governments and by churches of all denominations, and by private individuals, to give the youth of the land free educational opportunities. Our fathers and mothers have submitted uncomplainingly to taxation, and have generously contributed to every style of school affording mental and moral development for their offspring. *The time will never come when the people of this nation will permit the control of the intellect of childhood to be centered in a bureau at Washington, under the guise of a plan to 'encourage the States.'*" (*Congressional Record*, October 20, p. 7660.)

It is the desire of a certain element of this country to have the affairs of state dictated by an autocracy or a bureaucratic form of government. The people of America are not likely to soon forget that it was autocracy that was responsible for the world's war which cost the lives of 10,000,000 of the world's youth. In a government like ours, completely dependent upon an alert electorate, institutions should be so founded and ruled that they cannot be used for purposes for political propaganda.

The old saying, "that a burned child dreads the fire," is quite applicable here. We in Illinois have been through the getting singed process. The medical profession of this state feel keenly the effects of the attempted autocratic dictation by the Department of Registration and Education. We again say that we have no use for either autocracy or bureaucracy, they are both bound to breed bolshevism and we have too much of this in America today.

HOSPITALIZATION OF DRUG ADDICTS A COMPLETE FAILURE.

When New York City began its experiments of opening a dispensary for drug addicts, it was believed that the number of victims of narcotics was tremendous. The institution of the narcotic dispensary was hailed with acclaim by a few, but was deprecated

by most persons familiar with the complexity of meeting the problem in this particular manner.

While it is true that a hospital was soon opened for the withdrawal treatment, less than 30 per cent. of the addicts attending the clinic were willing to go to the hospital, even though all expenses were borne by the city.

According to Dr. S. Dana Hubbard, *Public Health Reports*, March 6, 1920, "The dispensary in which narcotic drugs are given to addicts for self-administration is not the right way to deal with this problem." He further comments that the clinic practically resulted in no cure. He claims that all patients sent to the hospital were cured, "in the sense that the drug withdrawal left no physical need or craving." This statement is followed by, "quite a number of these cases relapsed after discharge, some returning to the clinic under assumed names."

The narcotic clinic is closed. The work of the hospital is practically ended. The problem of treating narcotic addicts still remains unsolved. Negatively, it has been established that the dispensary is harmful in its effects, and its employment for narcotic addicts is unwarranted. Similarly, it is patent that the average addict does not voluntarily submit to institutional care for the withdrawal treatment, as long as it is possible to secure a supply of the drug. The hospital, moreover, has not demonstrated itself to be efficient in establishing a permanent cure for a large proportion of those willing to undergo the withdrawal treatment.

The weakness of the system apparently lies in the lack of facilities to secure the constructive after-cure which is so requisite for rehabilitating the addict. Even with a more advanced system of custodial care of longer duration, the problem remains unsolved when the individual breaks loose from his life of supervision, encouragement and control, and again undertakes to lead a normal life in the community. The after-cure of the addicts constitutes the real medical problem in narcotic addiction. The gradual withdrawal of the drug, the overcoming of the unpleasant symptoms arising from sudden deprivation, the building up of physical strength and nutrition, the psychiatric efforts at mental readjustment have not answered the question of permanent cure. Obviously, the personality of the addict is of paramount importance; and the alterations of mental mechanisms, that are essential to insure permanent cure, demand a form of after-care differing from the occasional type that thus far has proven insufficient for the permanent redemption of those afflicted with narcotic addiction.

All attempts to relegate narcotic addicts to hospitals and sanatoria lead to the same stopping point. What is to be done to and for the addict after the completion of his visit to the institution? It would appear to be of immense importance to study this problem from the broadest point of view, to investigate the results of hospital care, particularly of those hospitals and sanatoria which advertise themselves as unusually successful in their management of addicts. The report of a cure based upon institutional treatment is unsatisfactory if it merely describes results attained

at the time of leaving the institution. A follow-up system might well be applied to graduates of these institutions, in order to ascertain in how far they really are free at the end of six months, one year, and two years after severing relations with an institution that promised the cure for drug addiction. This is a problem that warrants thoughtful and practical investigation, such as has not been given by any committee of state or national organization. Admitting that the dispensary or ambulatory treatment is unsuccessful, what are the actual facts that promise encouragement to those advocating voluntary or mandatory commitment to a hospital?

The enactment of laws upon theoretic considerations, upon negative testimony, or uncorroborated statements is always hazardous, but it is particularly so when the condition that is to be attacked is as illusive and uncertain as that of drug addiction.—*American Medicine*, July, 1920.

DRUG ADDICTION CLINICS PRONOUNCED A FAILURE.

"The Bureau of Internal Revenue, which is charged with the administration of the Harrison Antinarcotic act, will not lend further indorsement to public clinics for the treatment and cure of drug addicts, Prohibition Commissioner John F. Kramer, giving as his reason for this action that "The net results obtained through the operation of such public clinics appear to have demonstrated conclusively that the cure of drug addiction through such means is a failure, and that hereafter no similar institution should have the indorsement of this bureau."

DOCTORS NOT RESPONSIBLE FOR DRUG ADDICTION.

Dr. Campbell, physician of the Harlem prison in testifying before the Whitney New York Legislative Committee says: "Physicians and Pharmacists are not at all involved in the Narcotic Drug evil; that few of the young men suffering from the drug habit that came to the Harlem prison had ever been seen by a physician, and that it is absurd to bring the Doctor and the Druggist in the matter at all."

He states further: "That the illegitimate user of the drug have sources of supply outside of the medical profession and the pharmacists. Dr. Campbell invited the Whitney Legislative Committee to inspect the Harlem prison and see with their own eyes the condition of the habitués who are confined there. The assertion of Dr. Campbell is corroborated by the statistics furnished by the District Attorney of the County of New York, who has said that less than ten per cent. of the offenders against the Narcotic Drug Law were either doctors or druggists. The evidence wherever taken corroborates the experience in New York, the real cause being known to the authorities. It is the duty of the officials to ascertain the source of supply and the channels of distribution of the drug in the underworld and to close them. This can be done without further hampering the

medical profession by imposing further restrictions on the legitimate practice of medicine and pharmacy in the handling of narcotic drugs.

Something is radically wrong when after five years of supervision under the Harrison law there is noted from all quarters of the United States a great increase in underworld traffic and peddling, and when honest practitioners of medicine are afraid to attend the legitimate needs of deserving sick people.

Anybody who will take the trouble to read the disclosures of the New York Whitney Legislative Committee investigation two years ago, together with the evidence brought out at the hearing of the Senator Cotillo Bill at Albany, New York, of April this year and the report of Albert J. Weber, foreman of grand jurors, United States of America, southern district of New York, September, 1917, term will be convinced that we need a thorough and impartial congressional investigation of the subject of opium traffic and the exploitation of drug addicts.

THE ACQUITTAL OF DR. LAASE.

The following tribute from the July issue of *American Medicine* covers the ground so thoroughly that we reproduce it.

It was with great satisfaction that the many friends of Dr. Christian F. J. Laase learned early this month of his acquittal in the United States District Court of an alleged violation of the Harrison anti-Narcotic Law. We who know Dr. Laase expected no other outcome, for we never believed for an instant that a man of his character and high principles had been guilty of any breach of good faith in the use or prescription of narcotics. To be sure, the character of the law is such that any busy physician is apt to make some error of omission or commission in keeping his records, or through misunderstanding commit some technical violation of the act. We have always felt that the law placed too great restrictions on the legitimate rights of an honorable profession. But the time to protest was before the law passed, not now. There is nothing to do now but to obey its mandates as earnest law-abiding citizens, using every care and effort to avoid any mistakes.

In its fundamental intent and purpose, the Harrison law—and the New York State law as well—deserve every commendation. The pernicious and illegitimate use of narcotics, and their wrongful and unscrupulous sale, could not be tolerated any longer. No honest physician can take any other position. But in framing these essential laws, those responsible for them, penalized the whole medical profession for the deeds of a few of its unscrupulous members, by imposing unnecessary restrictions and hardships on honest, self-respecting physicians, who had never misused narcotics, and never would.

This is our only complaint, that these laws are unfair to the great body of honorable physicians, in that they leave too little to the knowledge, honest intentions and good faith of honest practitioners of medicine.

But inasmuch as the law is an established fact there

is only one course for the self-respecting doctor to pursue and that is to conform to the law to the best of his ability.

If he does make an error, or his memory leads him to fail to carry out the letter of the law in some particular we do not believe he has much to fear from the ultimate result so long as he has not been guilty of some wilful violation, or some breach of good faith as a practitioner of medicine. If he is conscious he has made a mistake, or has failed to fulfill some obligation under the laws he should take steps at once to explain his position to the proper authorities and rectify his error of omission or commission. We believe he will find the authorities ready to meet him in the same spirit he shows in going to them.

Finally, the outcome of Dr. Laase's case exemplifies what we have previously stated that the physician who is honest, faithful to himself and his calling, and a man whose reputation is as clean and honorable as Dr. Laase's always has been, need have little fear of the ultimate result of any trial under these anti-narcotic laws. It is too bad, however, that there is not some provision under these laws for a private and preliminary review of any accusation against physicians in good standing without forcing them to undergo the mental anxiety, terrible expense and other consequences caused by public indictment and trial. To this some one might say that a physician should have no different treatment under these laws than any other citizen. But since these laws, in part at least, are directed against certain acts of physicians which they perform as a special right under state licensure, it would seem that any law regulating or abridging such rights could properly carry provisions for a preliminary review of any presumed violation.

Then again no law can justly inflict special or extraordinary punishment on any particular class of individuals, but this is just what public indictment and trial under these anti-narcotic laws do in effect to physicians, and this in spite of the fact that they may be absolutely innocent of any wrongdoing.

One more thing and we are done. Not all officials are equally endowed with good judgment and sympathetic consideration. Some men when vested with authority have been known to let personal enmity dictate their acts. Happily these constitute a very small minority, and a great majority of the officials we have met are fine men who aim to be kind and considerate in all their acts. But there are just enough of the other type to provide one more argument for a competent committee or board of review of every accusation or charge of violating the narcotic laws made against duly licensed physicians.

In congratulating Dr. Laase on the happy result of his trial, we wish to express to him our heartfelt regret for all that he has been forced to suffer during the long months between his indictment and acquittal. To a man of gentle personality, sensitive nature and the self-respect that goes with a knowledge of his honest desires and purpose, the experience he has passed through must have been soul trying. But "All's well that ends well," and in the joy of his

acquittal we hope Dr. Laase will be able to forget the anguish of the anxious days and go forward to new happiness and the successes we know he is capable of achieving.

Good luck, good friend, may all that you hope for and aspire to come to you in fullest measure. Finally, may the immediate future hold that which will abundantly recompense you for all that the immediate past has cost you.

NOTE:—A magnificent tribute, beautiful sentiment, very encouraging. One would think having been so thoroughly vindicated, acquitted on every charge, there would be no fear or trouble to continue taking care of this class of patients, but no, the administrators of our drug laws have their own interpretation of the laws and make it so hard and dangerous for a physician honestly to attend to them that honest physicians are afraid to begin or to continue. A survey of all the facts leads one to believe that those who have succeeded in having such laws placed on the statute books are the ones that are not molested. It is rumored that the slogan of the local agents is that "they are going to drive every doctor out of business who is attending to addicts;" but there seem to be favorites and enough are left alone so as not to make acute panics among the patients.

We doubt if there is a physician in America who could not at some time since the Harrison Narcotic measure was enacted have been indicted and obliged to stand trial for some technical violation of the law. It has been officially shown that doctors are only in a small measure responsible for drug addiction; that over ninety per cent. of addiction is due to underworld traffic; that addiction has increased by leaps and bounds since the Harrison Law was enacted. Therefore, this ineffectual sandbagging, blackmailing piece of legislation should be wiped off the statute books at the earliest possible moment.

We quite agree with the action of the House of Delegates of the Illinois State Medical Society at its 1920 session in condemning the present method of handling drug addicts and in asking for an impartial and thorough Congressional investigation of the subject.

IMPORTANT FACTS BROUGHT OUT AT THE TRIAL OF DR. LAASE.

In connection with the trial and acquittal of Dr. C. J. F. Laase of New York for an alleged violation of the Harrison Narcotic Drug Law. There are a few facts which may be of interest and which are not generally known.

Dr. Laase was tried before a jury which heard the plea of guilty entered by two druggists indicted with him before the jury took up his case.

Although instructed by the court to disregard this fact there is no doubt that the prosecution scored a palpable hit by this procedure. This act was referred to by the defendant's attorney, Mr. Robert H. Elder, as one of mental compulsion on their part. Dr. Laase was one of the few physicians who elected to stand trial. In almost all the local cases physicians have

pleaded guilty under advice of counsel. Their situation resembles today that of those accused of witchcraft during the Salem epidemic in 1692 where only those who admitted that they practiced this art and confessed to the effect escaped the gallows.

Dr. Laase has long been identified in the fight against the legislative activities of Dr. Alexander Lambert in Compulsory Health Insurance, Workman's Compensation and Drug Laws originating with Mr. Charles B. Towns. He was reminded of this fact by the prosecution when on the stand. That Dr. Laase was able to go through this ordeal is a sort of gratification to his friends however immaterial this fact may have been to the prosecution.

PSYCHOTHERAPY AND MORPHIN ADDICTION.

Camino reports the case of a young woman, married and markedly hysterical, who became secretly addicted to morphin (*La Medicina Ibero*, 1920, xi, 129). For four years she had injected the drug daily, the amount having reached two and one-half grams in 24 hours. Denutrition was intense and the patient suffered from nocturnal hallucinations of terrifying character. The picture was an extreme one, yet the author succeeded in effecting a cure in the patient's own home. He first told the woman that he would wean her gradually from the habit, incidentally substituting for muriate of morphin an amount of opium extract equal to the decrement in the former. The fraction of decrease was to be three centigrams daily. The only attendant was the husband. All went well until the daily dose was reduced to one gram. Here the patient's will succumbed and the author began to resort to hypnosis. The notably hysterical make-up of the patient made the outlook somewhat favorable. Considerable time was required to produce full hypnosis and there were numerous preliminary sessions. Once the state was induced, the patient responded without fail to post-hypnotic suggestion. The author sought to produce a horror of and repugnance to the drug, at the same time injecting plain water, which he told her was the drug and which would produce nausea and other disagreeable symptoms. These she actually developed, and when given a syringe and morphin to use at pleasure actually threw them away. The period of cure required four months. The author is not entirely clear as to the method by which the irreducible minimum of morphin was suppressed, but apparently this was effected through the aid of suggestion and was fully accomplished before the experiment of inspiring disgust for the drug was made.—*Medical Record*, June 26, 1920.

CAMOUFLAGING THE PUBLIC, BUT NOT FOOLING THE PROFESSION

One is likely to have a faulty perception of things when looking in from the outside, but he may, nevertheless, draw some conclusions that are without prejudice. In any discussion of the privileges conferred upon the medical profession by the federal prohibitory

laws the doctors of Kansas are outsiders, but their views of the ethical questions involved would, no doubt, vary quite as much as do those of the doctors of Illinois and Missouri. Although prohibition has been a legal fact in Kansas for a long time and doctors have even been prohibited from possessing or dispensing alcoholic liquors for a number of years, there are still some who have not yet learned that alcohol has no place in medicine, that it provides no beneficial therapeutic effect that cannot be more satisfactorily obtained from other drugs.

In spite of the unpopularity of their opinions there are physicians in this long dry state who will assert that, to the best of their knowledge and belief, good spiritus frumenti, administered in the right amount and at the right time, has saved for another struggle some who have already heard the rustle of the angel's wings. Possibly the long period of drouth in Kansas has eliminated from their consideration the beverage qualities of alcohol and the doctors here are able to estimate its therapeutic properties without prejudice—in other words, they may regard alcohol only as a therapeutic agent. At any rate they are outsiders in any such discussions as the following:

THE EASIEST WAY

A gynecologist was speaking. "No," he said, "I haven't taken out a permit. In twenty years of practice I have yet to find a case in which I could be sure whisky was beneficial. Not having a permit makes it easy for me to turn down requests from my intimate friends and patients." Then the opinions of a well-known internist, a pedestrician, a surgeon, and some general practitioners were sought. None of them, with the exception of one of the latter, had taken out a permit. He had given ten prescriptions in three months, and he admitted—not for publication—that in nine instances the prescription was written at the patient's request, and in the tenth something else would have served. Don't subject yourself to temptation; don't hurt the feelings of your patient or of a very particular friend by refusing to write a "prescription" when he pleads for one. Have a good excuse for not doing so. The easiest way is not to have a "permit," much less a book of blank prescriptions.—*Jour. A. M. A.*, July 24, 1920.

Outsiders will hardly appreciate this kind of advice. If physicians all over the United States refused to take out narcotic licenses on the same grounds there would be considerable needless suffering. The only difference is that no one questions the therapeutic value of opium and its derivatives. One who is confident that beneficial therapeutic effects may be obtained from the use of alcohol is no more justified in declining to take out an alcoholic permit, on the grounds stated in the above, than in declining to take out a narcotic license.

The laws of Kansas do not permit druggists to dispense alcohol or alcoholic liquors on the prescription of a physician, nor do they permit physicians to possess or administer such liquors, but there are doc-

tors in Kansas who are willing to take a chance with the law when the life of a patient is at stake. One feels like shaking hands with a doctor who has the intestinal equipment to do whatever he believes will save a life, in spite of law, religion or politics. But what about the doctor who would deprive himself of a possible aid in saving life in order that he might avoid a little trouble and inconvenience. The question is, as viewed by an outsider, whether it is better to play safe, for yourself, or sometimes take a chance, for the other fellow's sake.—*Jour. Kansas Med. Soc.*, Aug. 1920.

THE HIGHLY TRAINED NURSE IS NOT NECESSARY IN THE VAST NUMBER OF CASES OF ORDINARY ILLNESS

In his series of articles on Central and South America, the first of which appears in this issue of THE JOURNAL, Dr. Mayo calls attention to the nursing problem as he witnessed it in the Canal Zone. He speaks as one who has intimate knowledge of the value of the trained nurse and also as one who has observed the serious effects of the shortage of nurses for the general public. He emphasizes, as THE JOURNAL has done, the fact that a highly trained nurse is not necessary in the vast number of cases of ordinary illness. What is needed in such cases is an intelligent woman who has knowledge of the ordinary elementary facts of hygiene and care of the human body combined with good common sense. As Dr. Norman Bridge recently said in his commencement address before the graduates of Rush Medical College: "Any bright girl can be taught in sixty days to take temperature, pulse and respiration accurately, to prepare and administer invalid diet, to administer drugs in numerous ways, to give baths and fomentations, and attend to the personal wants of the invalid and to keep accurate records of the patient, and of her own doings."—*Jour. A. M. A.*, July 31, 1920.

FATALITIES FROM LOCAL ANESTHETICS

Nothing in medical practice is more serious than the death of a patient within two or three minutes after the injection of a local anesthetic, especially when the patient is in excellent health except for a condition requiring some minor operation. In view of the frequent employment of local anesthesia, it is apparent that even though the relative number of such accidents is low, in the aggregate the problem merits serious study. Efforts to reduce the dangers arising from the administration of local anesthetics have been hampered by limited knowledge as to the cause and mechanism of these unfortunate occurrences. From time to time appeals have been made to the profession at large to report the clinical manifestations following the injection of a toxic anesthetic, but the response has been poor. The Council on Pharmacy and Chemistry therefore asked the Section on Laryngology, Otology and Rhinology to appoint

a special committee to make a comprehensive study on the use of anesthetics in nose and throat work. The summarized report of this committee appears elsewhere in this issue. As is pointed out, the occurrence of twenty deaths in the personal experience of 100 operators shows that the subject deserves more earnest attention. Real progress, however, can be made only if cases are reported promptly and with attention to the factors that are in question. As an illustration of the immediate practical benefit that could follow this inquiry, it is worthy of note that a fourth of the deaths so far reported to this section arose from mistake in solutions. These can probably be avoided by preparing the cocain solution only as needed, from tablets colored with a distinctive dye so that the tint of the solution at once would call attention to the drug and its concentration. Physicians are urged to cooperate by reporting cases of idiosyncrasies, to the end that further study will result in definitely establishing the causes of sudden death, and that a better understanding may be attained as to the proper technic and proper choice of local anesthetics for each particular class of cases.—*Jour. A. M. A.*, July 31, 1920.

VIENNA PHYSICIANS, VICTIMS OF COM-
PULSORY HEALTH INSURANCE
UPLIFT, SAY THEIR MONTHLY
EARNING CAPACITY IS NOW
ABOUT \$4.39 AMERICAN
MONEY.

405 Union St., Brooklyn, N. Y.

To the Editor: Your August number is a real addition to Anti-Compulsory Health Insurance literature, not only the illuminating experiences of Dr. Ochsner in Germany and Austria, to which I might add this fact: That recently we in New York received from a New York Committee for Vienna Relief a letter asking alms for the Viennese physicians, and enclosing some letters from those unfortunate victims of Compulsory Health Insurance Uplift, in which they said their monthly earning capacity was about \$4.39 of our money; not only the common sense economies of Dr. Apfelbach and the economic analysis of Dr. Chapman, but even the words of the lay editor of *Modern Medicine*, John A. Lapp, who is an officer of the American Association for Labor Legislation and one of its most active and least dependable campaigners. I might say the late Mr. Lapp, because I note that he ran true to form at the Michigan State Society meeting and arrived in time to speak *last*, although the rules of the game prescribe that the affirmative

shall open discussion; this same trick was played in Troy and Schenectady in New York state.

By the "ideal which has been set before you" Mr. Lapp probably meant State Medicine, as enunciated by Dr. Vaughan, who referred to our New York Bill (Sage-Machold Bill, N. Y. Senate Bill 1533), which surely "did get a reception in New York, which leaves the plan about as far off as is Compulsory Health Insurance." We, in New York, know State Medicine to be the alternative of Compulsory Health Insurance; in fact Mr. Lapp threatened on December 11, 1919, before the Kings County Dental Society, that if we "defeated Compulsory Health Insurance we would have to take State Medicine," but the Legislature took the voters' endorsement of our view of that measure as seriously as they did the voters' endorsement of our view of Compulsory Health Insurance and eleven other bills and they killed them. You see, we know it for what it really is—a preparatory measure designed to engraft upon New York and other states a form of the State Socialization of Medicine, which could readily be merged in the National Socialization of Medicine (Nationalization of the Agencies for the Health Welfare of the People, *ILLINOIS MEDICAL JOURNAL*, June, 1920, page 427, through a Federal Department, with a secretary in the Cabinet, which could be subrogated to the right, title, interest, control and domination of all the agencies of healing, not alone in the agricultural districts so as to "bring the boys back to the farm and the blessings of a Health Center and an Hospital," which would make Dr. Vaughan content "to remain a proletariat," but in the large cities as well, the controlling power being the boards of electmen and supervisors in the villages and towns and small cities, and the boards of estimate and apportionment in large cities like New York. We are working on a plan for utilizing and amplifying the existing hospital and laboratory facilities and making them available to the people without forfeiture of their right of free choice, domestic privacy, self-respect and self-reliance, and continuing them in the control of medical scientists rather than turning them over to political opportunists, professional philanthropists, busybody social surveyors, et al.

Mr. Lapp, in his speech, puts us on notice that the solemn action of the duly accredited dele-

gates to the A. M. A. meeting at New Orleans in April, 1920, in opposing "Compulsory Health Insurance either State or Nationally controlled" is not to be taken seriously, and that "the question is still open, even though the resolution has been adopted," because they are counting upon medical history repeating itself and the doctors turning over and going to sleep again, so that the agents of the A. A. L. L. in the A. M. A. may play a little more politics and by "boring from within" put it over next year. I doubt it; while I am quite sure some of the minute men went back to bed after Paul Revere had aroused them, sufficient were true to their order to do things and to do them well, and I have faith that there will be sufficient red-blooded medical American citizens to defeat any attempt to prostitute the A. M. A. to the purposes of the A. A. L. L. a second time, whether it be Compulsory Health Insurance, State Medicine, National Socializations of Medicine or Coercive Medical Re-registration Acts, however subtle the propaganda may be.

Mr. Lapp, answering Dr. Ochsner's statement as to the increased days lost from eleven to fifteen in Germany, said it had been reduced to 8.6 per cent (I presume he meant days, because 8.6 per cent of 277 working days would be twenty-four days), and was a matter of testimony, but he was careful not to say whose testimony, because he knows that statement had its origin in the Statistical Department of the A. A. L. L. in New York City, where thirty-five cents can be made to look like a dollar and a dollar like thirty cents, something in the same manner that a fraction of a dollar per visit is made to look like the "\$2.50 per visit," which Mr. Lapp told the Michigan Society is to be the fee. I am glad that statement is a matter of printed record, because it will help us to determine for ourselves and our people, the voting public, just how dishonest the A. A. L. L. and its campaigners can be. The staff of professional philanthropists, Herr Professors, false doctrinaires, statisticians and the like employed by the A. A. L. L. are educated people, many of them college trained; they are charged with knowledge of the simple rules of arithmetic and the provisions of the Davenport Bills (which they constructed) and the relation of one to the other; they know, and you know, and I know, that their own propa-

ganda of 24 cents per week per employer and employee is \$24.96 for the 52 weeks of the year; they know that "for the purposes of the bills" the maximum wage is \$2.00 per day, \$12.00 per week as the basis for determining the "maximum cash benefits of \$8.00 per week of seven days;" they know that the statutory provisions of the Compulsory Health Insurance Bills provide cash benefits, maternity benefits, and funeral benefits which amount to \$11.06 per average man; they know that the most general application of the General Insurance Law of the State to the plan of Compulsory Health Insurance would make a 15 per cent. reserve and a 15 per cent. guaranty amount to \$7.49 (insurance corporations must maintain 25 per cent.); they know that a 16 per cent. operating expense (administration) is very, very conservative, which would be \$3.99 per average man, and the total of these three mandatory dispensations is \$22.54, and all you have left of that \$24.96 annual premium is \$2.42 for the health service and supplies for the "Average Man's Sickness Year" (which Mr. Lapp says is nine days), and the 2.43 days of maternity care per average man; one-eleventh of that \$2.42 is 22 cents per day for the medical care of that "average man and his pregnant wife of a pregnant insured woman," and that includes the doctor, consultant, specialist, nurse, druggist, hospital, laboratory and all medical and surgical supplies. "Where did you get that stuff?" said Mr. Lapp at page 91 of your August number. From the exact science of mathematics which says that \$24.96 minus a statutory \$22.54 leaves an available \$2.42, and that this \$2.42 divided by the A. A. L. L. statistical 11.43 days is 22 cents (eliminating decimals), from the official printed copy of the Davenport Bills and Laws of the State of New York and the experience of fourteen large employers of labor in the State of New York who maintain a workmen's (voluntary) insurance which requires an administration expense of 24 per cent., whereas I have only calculated 16 per cent. That's the answer to Mr. Lapp's question on the 25-cent fee, and there is no other answer, unless the insurance premium is brought up and up and up until it reaches 10.3 cents of every dollar a workman earns or the State is willing to make good the deficit of \$22.32 per average man (which means \$90,000,000 per annum for the 4,000,000

working people in New York State), to maintain the present fee standards of medical men, not to speak of this largesse of \$2.50 which Mr. Lapp scatters with so free a hand before an intelligent body of men at the Michigan State Society meeting in Kalamazoo. Dr. Ochsner was right; for every billion dollars the A. A. L. L. propagandizes we must add *TWO* billions to make theory agree with fact, and even if we added *TEN* we could not *BUY* an economic substitute for the personal confidence, love, devotion and self-sacrifice which the doctor-free and the patient-free practice of medicine of today exhibits.

Mr. Lapp "has examined every statement that has been made on the subject of health insurance in our language;" I presume that includes the provisions of the Davenport Bills, particularly Section 12, wherein it says that the (Insurance) Bureau may organize such other plans for medical service as the medical society may suggest *or as may be determined by the bureau*. All that stuff about playing battledore and shuttlecock with the schedule of fees until the "buck is finally passed" to an arbitration board is *ex post facto* administrative routine and resembles Dr. Ochsner's story of the pullets which "looked good, but lay no eggs;" that appeal is made *to the Bureau of Health Insurance* to have it revoke plans which the *statute itself gives the bureau sole power to determine*; then the statute provides that this very *Bureau of Health Insurance* shall be the body to *provide for the choice and assembling of the board of arbitration*. One does not require a head to fit a 6½ hat to understand that this is just a touch of humor introduced into the bill to lighten the serious labor of legislating for the common people, which the A. A. L. L. has assumed to itself, because the common people, "poor fish," is incompetent to think for himself, and these professional philanthropists vouchsafe to do it for him at so much per annum derived from the coffers of Foundations, which, although instituted in good faith, have come to be media for the exploitation of wildcat communistic theories which aim at the undermining of American traditions and institutions for which the men and women of all generations have given their lives.

JOHN J. A. O'REILLY, M. D.

Chairman New York State Association of the Medical and Allied Professions.

FEDERAL AID TO STATES WILL ULTIMATELY PROVE A CALAMITY

CENTRALIZATION OF POWER IN THE GOVERNMENT A FUTURE MENACE.

For every federal dollar appropriated on the state co-operation plan federal dictation goes with it. Not only dictation as to the expenditure of the federal dollar, but likewise dictation as to the expenditure of the dollar the state puts up to match the federal dollar; also dictation absolute as to the policies and program concerned with the expenditure of this money.

For years the federal government has been endeavoring to secure control and to dictate public health administration policy within the states. The right to do so has repeatedly been denied them by the Supreme Court of the United States. The control of public health affairs falls wholly and entirely within the police powers and rests absolutely with the state.

The federal government being denied the legal power to control state public health affairs is now endeavoring with the alluring power of money (federal aid to states) to obtain the right to dictate the policies and programs for state public health administration.

It is high time that the state public health officials should be awakened to the danger and to the seriousness of this charge, namely, that they are selling their souls for a mess of pottage.

Every progressive public health official believes in decentralization of authority. If they will just stop a moment and think they must realize that federal aid to states with federal dictation in local affairs means the centralization of public authority in Washington. This danger we have repeatedly set forth in this JOURNAL.

Correspondence

THE VORONOFF CIRCUS.

I append herewith a letter received by me from Dr. Serge Voronoff, which explains itself. Inasmuch as Voronoff should have been familiar nearly seven years ago with the American work on gland implantation and was perfectly familiar with it a month before his arrival in Chicago (it was still more familiar to his local managers and publicity artists), the acknowledgment that he was a Rip Van Winkle was rather belated.

The American profession may be assured of one glaring fact, viz.: *Voronoff, up to date, never has seen, much less performed, a single case of human sex gland implantation.*

As my letter of protest was in the hands of Voronoff's Chicago "manager" several days before our distinguished visitor arrived in Chicago, it would be interesting to know why he did not receive it until he was leaving the city. It is to be regretted that Dr. Voronoff is not aware that several American surgeons long preceded him in his so-called "interstitial gland" work. The spectacle of our distinguished visitor threshing over old American straw was very edifying. The scientific mountains labored and brought forth a dead dog. (See reports of his Chicago "demonstration.")

Chicago, Ill., Aug. 11, 1920.

Dr. G. Frank Lydston.

My dear Colleague: I have just received your letter and I am sorry to leave Chicago without having seen you. You are without doubt laboring under a misapprehension about my subject. Never did I either in my communication to the Congress of Paris in 1919, or in my work, say that I was the first to graft the sexual glands. Your book alone, has given the evidence that you have performed the operation three years before I ever made my experimental researches. I recognize this voluntarily and congratulate you upon it. What I myself have done was research work in the laboratory and I simply have reported the results thereof, without any pretension whatever, that I ever had made this operation in any fashion whatever before you. I am a laboratory man, not a practicing surgeon, and if your personal experience and my laboratory researches can contribute to the progress of our science, I will deem myself recompensed, as I am looking for no other gain. Let us work for the welfare of humanity, each in his own sphere, according to his own capacity and strength. You will recognize hereby the sincerity of my intentions. With best wishes.

Sincerely,

(Signed) VORONOFF.

IS ABORTION JUSTIFIABLE?

Pana, Ill., May 14, 1920.

To the Editor: In your JOURNAL of May, 1920, there is an article by Dr. Paul Goodner of New

Hampton, Iowa, entitled, "Pernicious Vomiting With a Plea for the Mother."

I wish to comment on a few of his remarks. He brings up the principal, "The end justifies the means." He says:

No one has an unqualified right to life; the murderer's life is a forfeit to the law, the soldier's life is often a forfeit to the State. Neither law nor the church condemns this violation of the sixth commandment.

How much more merciful is medicine, if it extinguishes a precarious life already doomed to extinction and in compensation saves a life still capable of preservation. Has not the woman herself a right to demand the sacrifice of her embryo by the common justification of self defense, or even by the old Biblical law that "Whoso sheddeth man's blood by man shall his blood be shed." For if the presence of an embryo in the womb insures a woman's destruction, in what other light can it be regarded than as the potential murderer of its host the mother? The decision of this momentous question must be left to the physician who occupies the unique position in civilized communities of arbiter of life and death without judge or jury.

Gentlemen, God alone has an unqualified right to our life. Who creates us? God, by the instrumentality of man; and God alone can take life. I can conceive of only three conditions in which man can take the life of another man. First, on the field of battle; second, by order of judge and jury, and third, in self-defense. Now the first two can be entirely eliminated for the purpose of our discussion. The third, in self-defense against an unjust aggressor, is the only argument Dr. Goodner gives. Now is the child an unjust aggressor? If the child is such, if it unjustly attacks its mother's life, then she can destroy it to save herself, and her physician can aid the innocent against the guilty party, but can it be proved that the infant is an unjust aggressor in the case? There can be no intentional or formal guilt in the little innocent babe. But can we argue that the actual situation of the child is an unjust act, unconsciously done, yet materially unjust, unlawful? Thus, if a madman would rush at me with a sharp sword, evidently intent on killing me, he may be called an unjust aggressor; though being a raving maniac, he does not know what crime he is committing, and is formally innocent of murderous intent. Materially considered, the act is unjust, and I can defend myself lawfully as against any other unjust assailant. Such is the common teaching

of moralists, but can the innocent babe be classed in the same category with the raving maniac? Why should it? It is doing nothing; it is merely passive in the whole process of parturition. Will any one object that the infant has no right to be there at all? Who put it there? The only human agents in the matter were its parents. The mother is more accountable for the unfortunate situation than the child. Certainly you could not, to save the child, directly kill the mother, treating her as an unjust assailant of her child's life? Still less can you treat the infant as an unjust assailant of its mother's life.

Now, according to Dr. Goodner, an evil means justifies a good end. This law, the end can never justify the means, is approved by all good men. But Dr. Goodner would do evil to one person that good might come to another. This is just the cause of the world's woes today. Turn the pages of history one by one, and you will always find this same law violated, and the cause of all disruptions in human affairs.

Are we ever justified in killing an unborn child in order to save the mother's life? This is the burning question. I answer: no, never. In support of this opinion let me take a parallel case, a decision given by Judge Coleridge, than whom there is not a greater jurist living.

The case is that of the British packet "Mignonette." On July 5, 1884, the prisoners Dudley and Stevens, with one Brookes and the deceased, an English boy between seventeen and eighteen years of age, part of the crew of the Mignonette, were cast away in a storm at sea, 1,600 miles from the Cape of Good Hope, and were compelled to take to an open boat.

They had no supply of water, no supply of food, and subsisted for twelve days on two pounds of turnips and a small turtle they had caught. They managed to collect a little rain water in their oil skin caps.

On the eighteenth day, having been without food for seventeen days and without water for five days, the prisoners suggested that some one should be sacrificed to save the rest. Brookes dissented, and the boy, to whom they referred, was not consulted. On that day Dudley and Stevens spoke of their having families, and of their lives being more valuable than that of the boy. The boy was lying in the bottom of the boat quite helpless, extremely weak and unable to make any resistance, nor did he assent to be killed to save the others. Dudley with the assent of Stevens went to the boy and telling him that his time had come, put a knife into his throat and killed him. They fed upon his flesh for four days, on the fourth day the boat was picked up by a passing vessel, and

the sailors were rescued, still alive but in a state of extreme prostration.

The prisoners were carried to the port of Falmouth and committed for trial, the charge being murder. Their excuse was that if they had not killed the boy and fed upon his flesh, there being no sail in sight, they would have died of starvation before being rescued; they said that there was no chance of saving their lives except by killing some one for the others to eat. The prisoners were committed for murder and sentenced to death, but appealed to the mercy of the court, pleading ignorance. It was found by the verdict that the boy was incapable of resistance, and authorities were then quoted to prove that, in order to save your own life, you have the right to take the life of an unjust aggressor in self-defense—a principal the truth of which is universally admitted.

But the evidence clearly showed that the defenseless boy was not an unjust aggressor against their lives, and consequently their only plea was that of expediency.

In a chapter in which he deals with exceptions created by necessity, Lord Hale, quoted by Justice Coleridge, thus expresses himself:

If a man be desperately assaulted and in peril of death and cannot otherwise escape except by killing an innocent person then present, the act will not acquit him of the crime and punishment of murder; for he ought rather to die himself than to kill an innocent person.

In the case of two men on a plank at sea which can only support one, the right of one occupant to throw the other overboard to save his own life, and in the instance of sailors to save themselves throwing passengers in the sea, are equally condemned by Judge Coleridge as unjustifiable homicide. So that under no circumstances is it allowable to kill an innocent aggressor to save your own life. I say innocent aggressor; but it is allowed in self-defense to kill, if necessary, an unjust aggressor against your life.

This case is exactly analogous to that of the child lying helpless in its mother's womb. She causes its death by her consent to the act of her agent, the physician in attendance.

Remark that Brooks, one of the sailors, dissented to the killing of the sailor-boy. This may happen in consultation, when one of the consultants does not admit the right to kill an un-

born child. Please also remember that the sailor-boy lay helpless at the bottom of the boat when his assailants killed him to save their own lives.

This child is not an unjust aggressor against the mother. It is placed in the womb without its consent, and is defenseless. It is the mother who is, as it were, the aggressor from the obstacles by a deformed pelvis, etc.; and she has not the right to ask or consent to the killing of the child who does not attack her.

Therefore, I repeat that the two cases are analogous; and if, as remarked by Justice Coleridge, murder was committed in the first instance, so is murder committed in the analogue, so we see, the principal points of the opinion enunciated by the learned judge and the principals therein laid down can, with equal force, be applied to the non-justification of abortion, by which the life of a defenseless child is sacrificed to save the mother.

Notice also that two of the perpetrators of the dead claimed that they had families, and that their lives were more valuable than that of the murdered boy. By abortionists this reason or excuse is frequently given with much sentimentality to justify the killing of the child. The child, they say, has no social value; the mother is the idol of her husband, the pride of the household, often an ornament to society, the mother of living or possible children. Therefore her life is more valuable than that of the unborn child. But who is to be the judge of the value of life? God alone knows the value of life. God alone knows whether a pregnant woman will be able to carry her child. Doctors only have opinions. How many times has death stared our patients in the face? How many times have doctors given patients up to die, no hope at all, and still those patients get well? Gentlemen, the ends can never justify the means.

Gentlemen, if once you grant that grave reason would justify abortion, there is no telling when you will stop in your career of crime. Today, for instance, you are called to attend a mother, who you think must die if you do not bring on an abortion. You are urged to do it by herself and her husband, and perhaps by other physicians. There are money considerations, too, and the possible loss of practice. Will

you yield to the temptation? The next day you are visited by a most respectable lady; but she has been unfaithful to her marriage vow. The consequences of her fall are becoming evident. If her husband finds out her condition he may wreak a terrible vengeance. Her situation is sadder than that of the sick mother of the preceding day. You can easily remove the proof of her guilt, we will suppose, easily spare a world of woes. Will you withstand the temptation? The third day comes a young lady, a daughter of an excellent family. Bright prospects lie before her; her parents' lives and happiness are wrapped up in that girl, but in an evil hour she has been led astray. Now she is with a child, she begs, she implores you to save her from ruin and her parents from despair. If you do not help her some other doctor or quack will do it; but you could do it so much better. If you should have yielded on the two former occasions, if you have already stained your heart with innocent blood, will you now refuse? Where are you going to draw the line?

The passions of men are insatiate, even in modern society. The more you yield to them the stronger grows their craving. Let me illustrate my meaning by a fact that happened a few years ago in Russia. It is just to our point. During a severe winter a farmer, having his wife and children with him on a wagon, was driving through a wild forest. All was still as death except the howling of wolves in the distance. The howling came nearer and nearer. After a while a pack of hungry wolves was seen following in the track of the wagon. The farmer drove on faster but they gained on him. It was a desperate race to keep out of their reach. At last they are just back of the wagon. What can be done? The next moment the wolves may jump on the uncovered vehicle. The children horrified, crouch near their trembling mother. Suddenly the father driven to despair seizes one of the little children and flings it among the pack of wolves hoping that by yielding them one he may save the rest. The hungry beasts stop a few moments to fight over their prey, but soon they are in hot pursuit again, fiercer because they have tasted blood. A second child is thrown to them, and after a while a third and a fourth. Human society, gentlemen, in this matter of

sacrificing fetal life is as insatiable as a pack of hungry wolves. Woe to anyone of you if he begins to yield to its craving, there is no telling when he will stop.

The end can never justify the means. A bad means cannot be used to effect a good end. A good means cannot be used to effect a bad end.

WM. F. HAGER, M. D.

SHOCK IN ARMY OPERATIONS.

Chicago, August 11, 1920.

To the Editor: In your August issue just received appears a discussion by Dr. John L. Yates of Colonel Macrea's paper on the "Prevention and Treatment of Shock in the Theatre of Army Operations," which I cannot allow to go unchallenged on the old principle: *et altera pars audiatur!*

I beg to assure Dr. Yates that I am free from personal animus. I know Dr. Yates to be an enthusiastic surgeon, and I know that he is sincere, but by his discussion he has convinced me that he, like thousands of others who have been mere doctors in uniforms and not military surgeons in the fullest sense of the word, has not the least conception of the character of modern warfare. And without such knowledge any formulation of surgical possibilities and limitations under the stress of modern tactics is simply out of the question.

Dr. Yates seems to forget that the Army has not been organized for the medical service, but that the medical service has been created for the Army. There is no case on record, and there never will be one, that a high military commander will suit his tactical disposition to the requirements of the medical service. The medical department has the duty to know something of the commander's plans and then decides on the most practical means by which it can accomplish the greatest amount of good under highly unfavorable conditions for scientific work.

Dr. Yates says: "It is our duty to see what we can accomplish, not only by criticism, surely not by insulting talk, but by telling and acting upon the plain, straight truth," and a few minutes later proceeds deliberately to insult the Regular Army Medical Corps.

He demands that the corps be reorganized,

not eccentrically around the authority of the Surgeon General, but concentrically around the service to the sick and wounded. That is a beautiful thought oratorically, and the report that the statement was applauded does not surprise me.

It is not quite clear to me what his other complaint, that professional attainment is not the means to preferment in the army, and that the fellow who knows how to play politics gets promotion, has to do with the care of shock, but as long as the subject has been brought up I am going to reply to that also.

I think I have a right to speak. Not only have I for the past eight or nine years preached preparedness on the part of the medical profession, not only have I studied the available literature on the last important campaigns, but I have seen our Army in action in 1916, and during my service in the World War I have come in contact with a number of newly-appointed medical officers both socially and officially. I have seen service at the front, and for some time after the armistice have had charge of what was doubtless the largest independent hospital in France, which drew its surgical material from a large sector of the American front.

And I say that in the many years of association with medical officers of the Regular Army, high and low, I have become convinced that that body represents as fine a class of medical men as can be found in any large medical center. The very entrance examination and the compulsion to keep abreast of the times in order to secure promotion assures that. Even generals and colonels who for years have held only administrative offices have often astonished me by their large fund of knowledge on surgical and pathologic problems.

What makes the situation bad is that there is a kernel of truth in Dr. Yates' complaints. Promotion has been given some self-seekers and good men have been overlooked. This is due entirely to lack of insight and initiative of certain intermediate superiors, or perhaps to rank favoritism on the part of these men; but that has happened in large armies before and will happen again, not only in national armies of free republics, but even in monarchic armies where everything is reputed to be regulated by rigid laws.

Headquarters, which has the last say on promotion, could not very well initiate promotion of

officers serving in the field except where the merits of individuals came to their attention.

Let us remind Dr. Yates and others that Pirogoff and von Bergmann were neither regular army surgeons nor rank worshippers, yet both these surgical giants are agreed on one thing as regards surgery in the field, namely, the need of organization, while the latter demands that in field surgery all individualization be prohibited and the work be done pattern-like.

These principles hold as good today in maneuver as well as in stabilizing phases of war as they did fifty years ago, irrespective of our advances in technics, including the use of gum salt solution for the treatment of shock.

Dr. Yates cites as typical of the regular army system the case of a division surgeon who was intelligent enough to learn that there is more to his job than pitching field hospital tents in proper alignment and making out proper official reports in triplicate. I cannot make out from the discussion why that officer came near being court-martialed, Dr. Yates telling us only that he bravely set up his hospitals anew after they had been knocked down by German shells.

The implication is that the man was not to blame for his lack of professional insight because he was the product of the regular army training.

I am astonished and humiliated that a man of Dr. Yates' standing should lend himself to such an unwarranted remark, and that a man of his ability should profess to believe that the Army has nothing more to think of than properly constructed latrines and tent and stretcher drill.

Does Dr. Yates not know that such brilliant men as Munson and Straub have bent every effort to familiarize the profession with modern tactics solely for the purpose of giving the wounded the best possible care, even under the worst possible conditions?

Does he not know that the drill is only one of the means to insure a modicum of efficiency among the enlisted members of the medical department?

Even laymen have written in astonishment at the huge preparations made by the Surgeon General for this war, admitting that all that human sagacity can accomplish has been thought out in detail.

Let me ask Dr. Yates whether such men as Finney, Crile, Mayo, Binnie, Young and others too numerous to mention have been given military rank and promotion simply because they were skillful in playing politics?

Let me ask him further whether Thomas splints have been carried even over the top to increase shock?

Were the first aid stations provided with heaters and blankets to increase the shock cases?

Did they teach in the field medical school at Langres, under the directorship of Colonel Ashford, a regular by the way, military surgery or triplicate reports?

Did they spend days and days in the great Central Laboratory at Dijon, under Colonel Siler, also a regular, searching by experiments the cause of shock and the best means of combating that condition for the purpose of acquiring material for military reports?

Does Dr. Yates realize that the very shells which knocked down field hospitals made the timely evacuation of the wounded from the front to the shock-teams impossible?

Gustavus M. Blech.

Columbus Memorial Bldg.

BUNKOING MEMBERS OF THE LEGISLATURE—A WARNING TO SELF-APPOINTED SPOKESMAN FOR THE PROFESSION.

In recent issues we called attention to the activities of some of the coterie of medical men who are at the bottom of the schemes for Compulsory Health Insurance, the drug laws, etc., in this country. In a recent issue we also called attention to the activities of this same crew of medico-political milkmaids at the hearing of the notorious Cotillo Bill at Albany, New York, in April of this year. Here is what happened at the hearing of the Kenyon bill introduced in the New York Assembly. This bill was intended to bring about annual re-registration of medical men, and who do you think were behind it? At the Cotillo hearing when Drs. E. Elliott Harris and S. Dana Hubbard were questioned whom they represented, Mr. Kenyon, the assemblyman, got up and said: They are the gentlemen that handed me the bill for annual re-registration of physicians. He further stated that they were a

committee from the State Medical Society—which was true—and that the State Society was behind the bill, and favored its passage unanimously. Mr. Kenyon took their word and urged its passage, and when it came to the reading of the bill and voting upon it, members from all over the house got up in opposition and stated that they had received remonstrances from their local medical societies and from their medical constituents objecting to the bill. The objections were so overwhelming that Mr. Kenyon was placed in a very embarrassing position before the house, and he felt compelled to withdraw the bill—just the same as did Senator Cotillo, only that Senator Cotillo was saved the mortification of being shown the true nature of his bill at a hearing before the committee, and not by the body of the legislators themselves, who had in the meantime learned of its true nature.

There are two ways by which the medical profession can speak officially. The first one is by referendum vote of the whole profession; the second is by official action of the State or National Medical Society.

Certain officers and ex-officers seem to think that because they hold or have held an official position in the medical organization that everything they may say is to be construed as an official expression of the whole profession.

Unless we miss our guess some doctors in this country will experience a rude awakening in the not far distant future. The profession is at last awake to a realization of the necessity of "the rule of the profession, by the profession and for the profession."

TOO MUCH GOVERNMENT IS LIKELY TO MAKE OUR PENITENTIARIES MOST DESIRABLE COUNTRY CLUBS.

The trend of the times towards the enactment of Blue Laws in America if not curtailed, will make every one a criminal and will effect materially the social status of the penal institutions of the country.

For a decade or more a bunch of would-be reformers have been trying to bolster up a campaign for the improvement of conditions in prisons of the country. So far the movement has lacked the necessary influential support. In for-

mer times the occupants of federal prisons have been chiefly murderers, gunmen, counterfeiters and other inmates without material wealth, intelligence or social standing. The enactment of anti-cigarette, anti-lovemaking, prohibition, anti-narcotic, espionage and other prohibitive laws, young as some of them are, is already changing the social status of our penal population. We are informed that a certain federal prison at present contains a certain millionaire of social standing who was convicted of having a still in his cellar, that it also contains the greatest social radical in America, a three times presidential candidate, together with many of his followers; that there are many business men of high standing who, like the millionaire, were unfortunate in their methods of procuring alcohol.

We are reliably informed that at our penitentiaries life and environment have undergone a revolution. The elite of the outside world come daily in automobiles, that books and luxuries are there in abundance, that there is much pleasant social intercourse among the inmates and the elite from the outside world. The incarcerated intellectuals and plutocrats claim that they have no complaints to make: that they are treated kindly; that they are not asked to work, as a rule, and if they are, they are given light clerical jobs. Many of them are gaining flesh and showing general improvement as a result of the prolonged rest. Of course, some are dissatisfied and claim that a federal prison is not all that it might be. At present there is a definite movement on foot for the establishment of prison golf links on the part of the plutocratic element; on the other hand, the social thinkers have some minor faults to find with the prison libraries. As the inmates have political influence and money, the improvements they desire will be forthcoming.

Take a look into the future and picture in your mind's eye the real situation inside the prison grounds when an enormous federal dragnet gathers its daily toll of smokers, flirts and blasphemers from all sections of the country and all social classes. Then, indeed, will these social centers be enlivened with brilliant talk, and then will the movement for their improvement gain a tremendous impetus. It is highly probable or at least not improbable that they may become

some of the most desirable country clubs in America.

"Heaven for Climate," said the great Mark Twain, but "Hell for Society." And it seems as though that natural stopping place on the road to the inferno, the calaboose, might become all that Mark Twain claims for hades itself. The social rounder who now tries to break into society may well be found in the future trying to break into jail.

KILLING RATS TO STOP BUBONIC PLAGUE.

The following formula is recommended by the United States Public Health Service as being the ideal rat killer.

The most efficient rat poison is Barium Carbonate, which is one of the few which a rat fails to detect. It is safe to handle, and in amounts necessary for use, it is not dangerous to man. It has been found that 15 grains are necessary to kill a cat, 20 grains to kill a chicken and that dogs withstand a dose of 140 grains, while 3 grains are sufficient to destroy any rat.

In using barium carbonate, it is recommended to mix one pound with three pounds of flour, and add sufficient water to make the whole into a firm paste. The resulting mass is sufficient for 2,300 baits each containing 3 grains of barium carbonate. Clean hands and dishes are necessary to avoid the addition of extraneous taste and odor which might diminish the attractiveness of the bait. Baits should be made fresh each day, or at most every second day—a hard stale bait is rarely eaten by a rat. The baits should be distributed in such parts of a building as are frequented by rats; and this is best done in the evening. A record should be kept of the number of baits so distributed and the number eaten by rats. During poisoning operations, special efforts should be made to keep all food usually available protected from their access.

WHO WILL FURNISH THE HORSE FOR A PAUL REVERE?

ARE THE CHILDREN OF UNREST WISER THAN THE CHILDREN OF ORDER?

The attempt to arouse the medical profession to a realization of its civic duty, while discour-

aging, is not hopeless, as evidenced by the experience of the professional guild of Kings County, New York. When the Guild sent out its first chain letter not a single peripheral responded. This may be taken as an index of the apathy and indifference of medical men even in such high places as state presidency.

An officer of the organization mentioned in commenting on their experience says: Ordinarily this would be discouraging, but when one has, as we have in organizing the professional guild, sent invitations to 250 doctors, dentists and druggists in an assembly district for an organization meeting and find three men responding, and talk with them as earnestly as if they were three hundred, and send them out to get three each; then address a meeting of twelve and do the same thing until an assembly district chapter was on its feet and functioning, and do practically the same thing in the twenty-three assembly districts of Kings County, one can realize the task we set for ourselves.

Passing from the rank and file to officers we invite 204 presidents and secretaries of medical, dental and pharmaceutical societies in New York County to a meeting to organize a guild such as we have; two men attended; we called another meeting, three responded, we kept at it and succeeded in organizing a live guild in New York County.

Organizing the profession is not a pink tea problem; nevertheless, it is an absolutely imperative duty for some one to arouse the medical profession in this country to prepare for their part in the war on the intellectuals. If the natural guardians of the profession are myopic (or worse), there surely must be among us those able and willing to furnish the "horse for Paul Revere." If we were apostles of disunion and disorder we could have our own newspapers or bulletins for the asking. Are the children of unrest wiser than the children of order? Surely the time has arrived when the profession must organize, and surely those who are not willing to do their share of the work in order to bring about this essential condition should be willing to pay liberally for the services of some one who has the ability and shows a willingness to do the work. Procrastination is the thief of time. Forewarned is forearmed.

THE HEALTH CENTERS BILL IN NEW YORK WITH CRITICISMS OF SAME

Inasmuch as similar bills will be introduced in Illinois and other States, we are publishing the New York Bill in full in order that the profession may understand at the earliest possible moment, legislation they will be called upon to meet.

The Bill in New York is known as the Sage-Machold Measure, being number 1533 in the Senate.

AN ACT

To amend the public health law, so as to provide for residents of rural districts, for industrial workers and for all others who cannot otherwise secure such benefits, adequate and scientific medical and surgical treatment, hospital and dispensary facilities and nursing care, to assist local medical practitioners, and in general to improve the health of the inhabitants of the state by authorizing a county, city or health district to create and maintain one or more health centers, to provide state aid for same, and making an appropriation therefor.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Article three of chapter forty-nine of the laws of nineteen hundred and nine, entitled "An act in relation to public health, constituting chapter forty-five of the consolidated laws," is hereby amended by inserting therein four new sections to be known as sections twenty-b, twenty-c, twenty-d and twenty-e and to read as follows:

§ 20-b. Health districts. The board of supervisors of any county, with the approval of the state commissioner of health, shall have the power to establish such county, or any part or parts thereof, as a health district and in such event shall appoint a *board of health for each of such districts*. The board of health shall consist of five members, at least *one of whom* shall be a *graduate of at least three years standing of a medical college*. The term of office of each member of said board shall be five years and the term of one of the members shall expire annually. The first appointments shall be made for the respective terms of five, four, three, two and one years. *The members of the board shall receive no compensation for their services but shall be allowed their actual and necessary traveling expenses, to be audited and paid in the same manner as the other expenses of the county.* When such *board of health* has been established it shall within its district exercise *all the powers and perform all the duties of local boards of health* conferred by any law or laws or by the state sanitary code.

Such board of health shall appoint a *district health officer* who shall possess such qualifications as may be prescribed by the *public health council*. Such district health officer shall serve for a term of six years and shall devote his whole time to the duties of his office except as hereinafter authorized. He shall within his district possess all the powers and duties conferred upon local health officers by any law or laws, or by the state sanitary code. The salary of such district health officer shall be fixed by the board of health of such district.

Local health districts now existing within such health district so established by the board of supervisors shall continue to exist as subdivisions of the health district. Local boards of health within such district shall continue to exist and to retain their present powers and duties subject to the rulings and ordinances of the district health board and shall continue to appoint health officers for such local districts, as now provided by law. The board of supervisors shall have power within any health district established as hereinbefore provided to consolidate with adjoining districts *all local health districts having a population of less than one thousand.* When such

Inefficient
Premium on
Graft
See Powers
of Board

Replaces
Existing
Health
Boards

Here the State
P. H. Council
Becomes a
Political
Factor
State Wide

Present
Boards of Health
to Become
Subordinate

Centralization
vs.
Convenience

Open Door for
Centralization
Plan of
Rockefeller
Foundation

Just What are
Those Qualifications?
"See Grading"
In Nationalization
Plan

State Com. of H.
Final Arbiter

Existing
Hosp. Control
Surrendered
or
Confiscated

Just What Is
Left for the
Uncontrolled
Practitioner
or
Specialist
or Hospital?

State
Practising
Medicine
for Fees

Nursing

Public
and
Private
Schools
Supervision

Periodical
Examination
Fisher's Life Ext.
Institute

Blanket
Provision

consolidation has been ordered by the board of supervisors the same steps shall be taken and the same rights and duties devolve upon all persons as ensue upon the signing of the order for consolidation by the state commissioner of health as provided for in sections twenty and twenty-a of this act. Provided, however, that no consolidation so ordered shall take effect until the expiration of the terms of the local health officers affected, who are in office on the first day of July, nineteen hundred and twenty, unless with the consent of such local health officers. The local health officers within the health districts when established shall *act as deputies to the district health officer. They shall, subject to the supervision of the district health officer, perform within their local districts all of the duties of local health officers and shall serve for the same terms and under the same conditions as now are, or hereafter may be, prescribed by law.* Present local health officers in office at the time of the passage of this act shall act as such deputies during their present term of office and shall be eligible for reappointment if they have complied with the qualifications of the public health council, and *hereafter no one shall be appointed as local health officer unless he has complied with the qualifications prescribed by the public health council or has been duly exempted from said qualifications by the said council.*

§ 20-c. Health centers. The board of supervisors of any county may establish therein a health center or centers which shall serve the whole or part of the county. In the resolution of the board of supervisors establishing such health center they shall define the area which it is intended to serve. Such board when it has decided to establish a health center shall formulate a general plan for the same which may include any one or more of the parts hereinafter set forth, and which shall be subject to the approval of the state commissioner of health. Any one or more of the following parts of such health center may be established at one time with the approval of the state commissioner of health:

a. For the erection of hospitals or for arrangements with *existing hospitals* or other institutions, or both, so that they shall form essential parts of the health center. Such hospital provision may include as units thereof, hospitals or other kindred institutions now existing, or hereafter established, and special pavilions for the care of *tuberculosis and other communicable diseases, and for children, maternity cases, for mental diseases and other groups of diseases.*

b. Clinics for outpatients, including especially those now regarded as public health clinics, such as *maternity, prenatal and child welfare clinics, those for tuberculosis and venereal disease, mental and nervous diseases and defects, clinics for school children, dental clinics, and also general medical, surgical and diagnostic clinics.*

c. For *clinical, bacteriological, X-ray and chemical laboratories* auxiliary to the state laboratories affording modern laboratory facilities needed in the diagnosis and treatment of disease, with *services at a modern charge or fee if the person served is found by the superintendent of the health center to be unable to pay in accordance with the procedure hereinafter set forth in paragraph number six of the duties of the superintendent.*

d. For *public health nursing service* for all parts of the district.

e. For co-operation with the department of education in securing proper *medical supervision and medical inspection* for school children and assisting in providing the *facilities* to enable *practitioners* to secure adequate treatment for *all school children showing physical defects or disease.*

f. For periodical medical examination of such inhabitants of the district as desire it and are willing to *pay a proper charge* therefor.

g. For headquarters for *ALL OTHER* public health, medical, nursing and other public welfare agencies of the district which wish to utilize the same.

Enter the
Modern
Hospital
Association of
Chicago

Lord!
What
Power

For all this
the Citizen
Pay and Pays
and Pays

And all this in
View of a Probable
Doubling of the
Income Tax
Rate in N. Y. State
for 1921

Health Service
and Supplies in
N. Y. State
\$250,000,000

Control Private
Hosp. under
Dartmouth
College Decision

To Take Over
Control of Hosp. in
Accordance with Natl.
Plan.

4 Laymen
1 Judge
1 Male } M. D.
1 Female } M. D.

1 Day in
30 for Manage-
ment

The location, site, plans and initial fixed equipment of the health center and of any part or parts thereof shall be subject to the approval of the state commissioner of health. The state commissioner of health and the state architect shall provide *model plans for such centers* for any community requesting the same. The board of supervisors when they shall have determined to establish such health district shall have the following powers:.

1. To purchase or lease real property therefor or acquire such real property and easements therein. Provided, however, that no such property shall be purchased or acquired until such purchase or acquisition shall have been *approved by the state commissioner of health*.

2. To enter into contracts for the erection of all necessary buildings and the alteration of any buildings on the property when acquired for the use of such health center or any part or parts thereof. Provided that the location of the buildings and the plans and specifications for such erection and alteration, together with the initial fixed equipment, *shall first have been approved by the state commissioner of health*. Any changes in such locations or plans made subsequent to the approval of the state commissioner of health shall also be approved by him, and the state commissioner of health and his duly authorized representatives shall have the power to inspect all parts of such health centers during the course of their construction or alteration for the purpose of seeing that such plans or specifications are complied with.

3. To cause to be assessed, levied and collected such sums of money as it shall deem necessary for suitable lands, buildings and improvements for such health center, or part or parts thereof, and for the maintenance thereof, and for all other necessary expenditures. Provided, however, that where the health center is intended to serve less than a whole county, the expenditures made in connection therewith shall be *assessed only against the district served by the health center*. Said board of supervisors shall also have power to borrow money for the erection of such health center, or parts thereof, and for the purchase of a site therefor, on the credit of the county and issue county obligations therefor in the same manner as it may do for other county purposes.

4. To accept and hold in trust for the county any grant or devise of land or any gift or bequest of money or other personal property or any donation to be applied, principal or income, or both, for the benefit of the said health center or any part or parts thereof, and apply the same in accordance with the terms of the gift.

5. *To appoint a board of managers* of the health center which shall consist of seven members one of whom shall be the county judge ex officio. Of the others, *two shall be physicians* duly licensed to practice in the state of New York and at least *ONE SHALL* be a woman. The board shall hold a meeting at least once each month and for each regular meeting, each member attending shall receive the sum of five dollars and his or her actual and necessary traveling expenses, to be audited and paid in the same manner as the other expenses of the health center. Special meetings may be called from time to time in such manner as the by-laws may provide. For attendance at such special meetings no fees shall be paid to members. The members of such board, with the exception of the county judge, shall be first appointed so that the term of one member shall expire within one year from the first day of January of the year in which he shall have been appointed, the term of another member shall expire within two years from the first day of January of the year in which he shall have been appointed, the term of another member shall expire within three years from the first day of January of the year in which he shall have been appointed, the term of another member shall expire within four years from the first day of January of the year in which he shall have

been appointed, the term of another member shall expire within five years from the first day of January of the year in which he shall have been appointed, and the term of the remaining member shall expire within six years from the first day of January of the year in which he shall have been appointed. Thereafter, the terms of membership shall be made for six years from the first day of January of the year in which the appointment is made.

The board of managers of each health center shall have the following powers and duties:

Powers
of
Patronage
Committee
Qualifications
Vague

Salaries

Control

Regulations

Regulate
Fees

A. Frankenstein
In the Making

Exit Doctor
Enter the
District Nurse

Lay Supt.
First Appoints
Medical Board
Then
Consults (?)
It's Appointee
As to Staff

Public and
Private Hospitals

1. *To appoint a superintendent of the health center, or any part thereof, who may also be secretary and treasurer of the board of managers. The district health officer may be appointed as such superintendent. Any person appointed as such superintendent shall comply with the qualifications prescribed by the public health council.*

2. *To fix the salaries of the superintendent of the health center and of all other officers and employees, within the limits of the appropriations made therefor by the board of supervisors.*

3. *To exercise general management and control of said health center, of the grounds, buildings, attending physicians, employees and inmates thereof, and of all matters relating to the government, discipline, contracts and physical concerns thereof.*

4. *To make such rules and regulations as may be advised by the medical board as necessary for the medical and surgical care and treatment of patients and for the study of the nature and cause of death in cases terminating fatally. They shall make rules and regulations regulating the fees to be charged for all medical and surgical services in such hospital, and fixing the salaries of attending physicians and all other rules and regulations necessary for the carrying into effect of the purposes of such health center. It is the purpose of this act to provide, through the co-ordinated work of experts in the different departments of medical practice, adequate facilities for accurate diagnosis and efficient treatment of disease. Boards of managers are directed to carry this purpose into effect so far as practicable.*

Physicians and surgeons rendering services in hospitals and clinics shall be properly compensated for their services and boards of managers shall see that such compensation is provided.

5. *Notwithstanding any other general or special law, to erect all additional buildings found necessary after the health center has been placed in operation and make all necessary improvements and repairs within the limits of the appropriations made therefor. Provided that the location of the buildings and the plans and specifications for such additional buildings, improvements and repairs shall first be approved by the state commissioner of health.*

6. *To employ, within the limits of its appropriations, public health nurses for the discovery of cases of communicable or other diseases, for the visitation of such cases and of patients discharged from the health center hospital or from any other part of such health center, and for the performance of such other duties as may seem proper.*

7. *To appoint a medical board which shall have charge of the medical and surgical affairs of the health center.*

8. *To appoint and employ, after consultation with the medical board, all members of the medical, surgical and laboratory staff of the health center. All persons appointed to such positions shall comply with such requirements as may be prescribed by the public health council.*

The superintendent of such health center shall be the executive officer of all hospitals, clinics, laboratories and other activities of the health center and, subject to the board of managers and the approval of the state commissioner of health, shall:

1. Equip the health center hospital and all other parts of such health center with all necessary furniture, appliances, fixtures and other needed facilities for the care and treatment of patients and for the use of officers and employees thereof, and purchase all necessary supplies within the appropriations made therefor.

2. Have general supervision and control of the internal affairs of the health center and maintain discipline therein and enforce compliance with and obedience to all rules, by-laws and regulations adopted by the board of managers for the government and control of such health center and the employees and inmates thereof. He shall make and enforce such further rules, regulations and orders as he may deem necessary, not inconsistent with law or with the rules and regulations of the board of managers.

3. Appoint such other employees as he may think necessary and proper within the limits of his appropriations, except the attending physicians.

4. Cause proper accounts and records of the business and operation of the health center to be kept; certify all bills and accounts including salaries and wages, and transmit them to the board of supervisors which shall provide for their payment in the same manner as other charges against the county.

5. Receive, subject to the rules and regulations of the board of managers of the health center, into such health center, or to any part thereof, in order of application, or treat in such clinics, dispensaries, et cetera, any person in the health district, who is in need of medical or surgical care, *irrespective of whether such person is able to pay for such care or not.*

6. Cause to be made such inquiry as he may deem necessary as to the ability of each patient, or the relatives of such patient legally liable for his support, to pay for his care and treatment. If he shall find that such person, or said relatives are able to pay for such care and treatment in whole or in part an order shall be made by the superintendent directing the patient or said relatives *to pay to the treasurer of said health center* for the support or treatment of such person, a specified sum per week in proportion to their financial ability, but not in excess of the actual cost of maintenance. He shall have the same power and authority to collect such sum from the patient or his relatives *legally liable for such support as is possessed by an overseer* of the poor. If the superintendent finds that such patient or said relatives are able to pay only in part, or not at all, for the care and treatment in said hospital, *the unpaid cost of maintenance or treatment shall become a charge upon the county or district.* Provided, that in case such patient has not acquired a settlement within such health district under the provisions of the poor law, the superintendent of such health center shall collect from the town, city, village or health district in which such person has a settlement the cost of his maintenance, or may in his discretion return such patient to the town, city, village, county or health district in which he has a settlement. No employee of such health center, *except physicians*, shall receive or accept from any patient thereof, any fee, payment or gratuity whatsoever. *Any physician* who has been attending any patient prior to such patient's admission to the hospital of the health center shall be allowed, if the patient so desires, *to continue such treatment while the patient remains in the hospital.*

7. Cause to be kept proper records of the admission and treatment of each patient, including name, age, sex, color, marital relation, residence, occupation, place of last employment and the names and addresses of his or her nearest relatives. He shall also cause a careful examination to be made and recorded of the physical condition of all persons admitted to or treated at the hospital and shall cause a record to be kept of the condition of

See Section 8

Here Is
Where the
Practice
of Medicine
By the
State, as
Such, Is
Extended

Hospital
or
Health
Centre

Poor House

Individual
Self-respect
Would Prevent
Entrance of
Average
American—
Not So
the Foreign
Element
Which
Revels in
Pauperism

Graft

Wide Open
Hospital
Plan

such patient during treatment and when discharged and from time to time thereafter.

8. Discharge from such hospital or cease to provide treatment for any patient who is found to have recovered sufficiently from his illness no longer to be in need of hospital care, or other treatment, or who shall violate wilfully or habitually the rules or who for any reason is no longer a suitable person for treatment.

9. Collect and receive all moneys due the health center, keep an accurate account of the same and report the same to the monthly meeting of the board of managers and transmit the same within ten days after such meeting to the treasurer of the county.

10. Give a bond before entering upon the discharge of his duties, in such sum and with such securities as the board of managers may approve, to secure the faithful performance of his duties.

§ 20-d. Health centers in cities. *The common council* or any body exercising similar duties in any city, and the *board of estimate and apportionment in the city of New York*, shall have the power, with the approval of the state commissioner of health, to establish a health center or centers in such city and to define the limits thereof. Upon the establishment of such health center by such city all the powers and duties herein provided for in relation to the health centers shall devolve upon the corresponding officials of the city, excepting that the *mayor shall appoint* the members of the board of managers of such health center and that the board of health of such city, if there be such board of health, and the health officer thereof shall be appointed as now or hereafter provided for by law. All of the provisions of section *twenty-c hereof* shall apply in so far as practicable to health centers when established in cities.

§ 20-e. State aid. Where such health district or health center shall have been established with the approval of the state commissioner of health, the state, through the legislature, shall provide the following aid:

a. For the construction and equipment of hospitals one-half of the cost thereof, such payment not to exceed seven hundred and fifty dollars per bed established in such hospital, and for this purpose no aid shall be granted from the state for beds in excess of one to each five hundred of the population affected.

b. A grant of *seventy-five cents per day* for each free patient maintained in any hospital operated as a part of such health center.

c. A grant for the establishment of each outpatient clinic of the health center equal to one-half of the cost of installation, the amount to be paid by the state for this purpose not to exceed five thousand dollars per clinic.

d. A grant towards the ordinary current expenditures for free treatments, in such clinic not to exceed fifty per centum of such cost and not to exceed an average of *twenty cents per treatment*.

e. A grant of one-half of the actual cost of maintenance of the laboratory and laboratories of health centers not in excess of *three thousand dollars per annum* for each laboratory and of fifteen hundred dollars towards the initial installation and equipment of such laboratory.

f. A grant of *ten cents per capita per annum* towards the *salaries of deputy health officers in such health districts* where the local district has less than fifteen hundred population, and of five cents per capita per annum towards the salaries of deputy health officers in local districts having a population between fifteen hundred and three thousand, *in addition to such salaries* as they are entitled to receive from the local treasurer.

Provided, however, that no state aid in excess of the above specified amounts shall be granted hereunder in counties or districts

Cities of
1st. Class

N. Y. City Population
5,000,000-10,000 beds

This
Includes
All Service
and Supplies
Including
Employed
Doctors

\$5,000 Clinic
Equipment
for Out Service

20c
Medication

Laboratory

More Tax

Commission
On Population
of District

Health
Centre
to 50,000
Population

having more than fifty thousand population if more than one health center is *established for each fifty thousand inhabitants*, or major fraction thereof.

It is the intention of this act to provide additional hospital and clinical facilities and, therefore, no grant from the state hereinafter provided for shall be given to any public institution which is already established at the time of the passage of this act, excepting clinics especially established for prenatal, maternity and post-natal care, and those for children, tuberculosis and venereal diseases.

Consultant's
Expenses

The salaries and traveling expenses of consultants, experts and other employees of the state department of health, and other expenses necessarily incurred by the state department of health in the execution and enforcement of this act shall be paid from the sum appropriated for grants towards maintenance and operation of health centers as hereinbefore specified, such sum for this purpose not to exceed two hundred and fifty thousand dollars in any one year.

See the
National
Standardizing
Plan As
Dovetailing
With This

The work of all health centers, including hospitals, clinics, laboratories, et cetera, connected therewith, shall be inspected and *standardized by the state department of health*, and all the state grants herein provided for shall be paid only on the written approval of the state commissioner of health after inspection of such center and the work done therein.

Provision shall be made by the state commissioner of health for occasional or periodical consultations and clinics at the health centers *by specialists in medicine and surgery*. To these consultations and clinics health officers and physicians may bring their patients for assistance in diagnosis and for advice as to treatment. *Persons able to pay in whole or in part for consultative services* shall be charged a reasonable sum therefor and the sum so received shall be paid into the treasury of the health center.

This Is
Delicious

It is not intended that this arrangement shall in any way affect the private relation which may exist between the patient and his own physician who brings him to the health center.

Health center laboratories shall be under the supervision of the director of the state health department laboratories and the facilities of the state laboratory service shall be available at all times to supplement those of the laboratories of the health centers.

No One
Can Take This
Appropriation
Seriously

§ 2. There is hereby appropriated out of any moneys in the treasury of the state not otherwise appropriated, to be available on the first day of July, nineteen hundred and twenty, the sum *of one hundred thousand dollars (\$100,000) for carrying out the purpose of this act* and for the expenses incurred by the state department of health in putting this act in operation, to be payable by the state treasurer on ~~the~~ warrant of the comptroller on the certificate of the state commissioner of health.

Commentaries by
Chairman of
Professional Guilds of
Kings County, N. Y.

§ 3. This act shall take effect immediately.

JOURNAL LATE ACCOUNT PAPER SHORTAGE.

For the second time in recent months the JOURNAL appears late on account of the condition of the paper market. An ample supply for six months was ordered in June, but owing to a short-

age in the supply, together with embargoes on freight shipments and priority orders, it has been impossible to secure the paper on time. Now, after working night and day to have the "forms" ready and being advised that there was nothing doing in the line of printing for lack of paper, wouldn't it jar you?

ANNUAL ASSEMBLY TRI-STATE DISTRICT
MEDICAL ASSOCIATION

Waterloo, Iowa, October 4, 5, 6 and 7
Headquarters, Russell Lamson Hotel

October 4, 1920

8:00 to 10:00 A. M. Registration for Doctors and Ladies at First Congregational Church, corner North Fourth and South Streets.

10:00 to 12:00 A. M. Address and Diagnostic Clinic (Pediatrics). Dr. Julius P. Sedgwick, Professor of Pediatrics, University of Minnesota Medical School, Minneapolis, Minnesota.

Dr. Frederick C. Rodda, Assistant Professor of Pediatrics, University of Minnesota Medical School, Minneapolis, Minnesota.

Afternoon Session

1:00 to 3:00 P. M. Diagnostic Clinic (Medical). Dr. William Engelbach, Professor of Medicine, St. Louis University School of Medicine, St. Louis, Missouri.

Dr. Charles L. Mix, Professor of Medicine, Head of the Department of Medicine, Loyola University Medical School, Chicago, Illinois.

Dr. Leonard G. Rowntree, Professor of Medicine, University of Minnesota Medical School, Minneapolis, Minnesota.

3:00 to 3:30 P. M. Intermission.

3:30 P. M. Diagnostic Clinic (Surgical). Dr. John F. Binnie, Kansas City, Missouri.

Dr. Robert B. Osgood, Boston, Massachusetts.

Evening Session

7:00 P. M. Address of Welcome. Hon. Nelson Frisbie, Mayor of Waterloo.

Response to Address of Welcome. Dr. Edwin P. Sloan, Bloomington, Illinois.

7:45 P. M. Public Address for the Physicians and Citizens of Waterloo. Surgeon-General Hugh S. Cumming, United States Public Health Service, Washington, D. C.

9:00 P. M. Reception and Entertainment for Doctors, Ladies and Guests.

Second Day—October 5, 1920

7:00 A. M. Diagnostic Clinic (Surgical). Dr. Robert T. Morris, Emeritus Professor of Surgery, New York Post-Graduate Medical School, New York, New York.

7:00 A. M. Diagnostic Clinic (Medical). Dr. Alfred Stengel, Professor of Medicine, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

9:00 A. M. Malnutrition in School Children. Occurrence, Significance, Treatment. Dr. Fred Moore, Des Moines, Iowa.

Discussion Led by Dr. William J. Herrick, Ottumwa, Iowa.

9:20 A. M. Report of a Case of Cardiospasm with Enormous Dilatation of the Esophagus. Dr. Thomas J. Snodgrass, Janesville, Wisconsin.

Discussion Led by Dr. John F. Pember, Janesville, Wisconsin.

9:40 A. M. Treatment of Inoperable Cyst Adenoma of Ovary by Laparotomy and Radium. Dr. Paul Markley, Rockford, Illinois.

Discussion Led by Dr. Charles W. Hanford, Chicago, Illinois.

10:00 A. M. Phlebitis in the Puerperium. (Report of a Case.) Dr. Edward T. Edgerly, Ottumwa, Iowa.

Discussion Led by Dr. Edward S. Murphy, Dixon, Illinois.

10:20 A. M. Pneumococcus Peritonitis. Dr. Victor F. Marshall, Appleton, Wisconsin.

Discussion Led by Dr. David J. Twohig, Fond du Lac, Wisconsin.

10:40 A. M. Intermission.

11:10 A. M. Principles of Drainage in Empyema. Dr. John F. Binnie, Kansas City, Missouri.

Afternoon Session

1:00 P. M. President's Address. Dr. George V. I. Brown, Milwaukee, Wisconsin.

1:20 P. M. The Teeth in Their Relation to Systemic Disease or Infection, from the Standpoint of a Radiologist. Dr. Fred S. O'Hara, Springfield, Illinois.

Discussion Led by Dr. Arthur E. Rodgers, Bloomington, Illinois, and Dr. Arthur W. Erskine, Cedar Rapids, Iowa.

1:40 P. M. Intestinal Sand, with Report of a Case of Twenty Years' Standing. Dr. Frank M. Fuller, Keokuk, Iowa.

Discussion Led by Dr. Tom B. Throckmorton, Des Moines, Iowa.

2:00 P. M. The Outlook for the Fourth Area of Surgery. Dr. Robert T. Morris, Emeritus Professor of Surgery, New York Post-Graduate Medical School, New York, New York.

3:00 P. M. Diabetes Insipidus and the Regulation of Water Balance. Dr. Leonard G. Rowntree, Professor of Medicine, University of Minnesota Medical School, Minneapolis, Minnesota.

3:40 P. M. Tuberculosis Among Our Soldiers, as Manifested by Autopsy Findings. Dr. Daniel J. Glosmet, Des Moines, Iowa.

Discussion Led by Dr. John W. Shuman, Sioux City, Iowa.

4:00 P. M. Intermission.

4:30 P. M. (Subject Announced Later.) Dr. Alfred Stengel, Professor of Medicine, University of Pennsylvania Medical School, Philadelphia, Pennsylvania.

Evening Session

7:00 P. M. Roentgenologic Aspect of Pulmonary Metastasis. Dr. Russell D. Carman, Professor of Roentgenology, University of Minnesota Graduate School of Medicine, Rochester, Minnesota.

7:40 P. M. Encephalitis Lethargica. Dr. Charles L. Mix, Professor of Medicine, Head of the Department of Medicine, Loyola University Medical School, Chicago, Illinois.

8:20 P. M. Address. Surgeon-General Hugh S. Cumming, United States Public Health Service, Washington, D. C.

General Discussion on Public Health, by Dr. Cornelius A. Harper, Secretary, State Board of Health, Madison, Wisconsin; Dr. Guilford H. Sumner, Executive Officer, Iowa State Board of Health, Des Moines, Iowa; and Dr. St. Clair Drake, Director, Department of Public Health, Springfield, Illinois.

NOTE: Some time during the day, on October 5, Dr. Edwin Henes, Jr., of Milwaukee, Wisconsin, will read a paper on "The Surgical Treatment of Typhoid Carriers."

Dr. S. W. McKelvey, Peoria, Ill., will present a paper on Ankylosis of the Inferior Maxilla.

Third Day—October 6, 1920

7:00 A. M. Diagnostic Clinic (Medical). Dr. Harlow Brooks, Professor of Clinical Medicine, University of Bellevue Hospital Medical School, New York, New York.

7:00 A. M. Diagnostic Clinic (Surgical). Dr. George W. Crile, Professor of Surgery, Western Reserve University School of Medicine, Cleveland, Ohio.

9:00 A. M. Megalocolon, or Hirschsprung's Disease. Dr. Thomas W. Nuzum, Janesville, Wisconsin.

Discussion Led by Dr. John M. Dodd, Ashland, Wisconsin.

9:20 A. M. Tumors of the Breast. Dr. William Jepson, Sioux City, Iowa.

Discussion Led by Dr. William J. Egloff, Mason City, Iowa.

9:40 A. M. Mental Reconstruction. Dr. Ralph T. Hinton, Illinois State Hospital, Elgin, Illinois.

Discussion Led by Dr. George Mitchell, Peoria, Illinois, and Dr. Frank I. Drake, Superintendent Wisconsin State Hospital, Mendota, Wisconsin.

10:00 A. M. Results in the Open Treatment of Fractures. Dr. Joseph F. Smith and Dr. Merrit L. Jones, Wausau, Wisconsin.

Discussion Led by Dr. Wilson Cunningham, Platteville, Wisconsin.

10:20 A. M. Subsequent Treatment in Casualty Cases. Dr. Don W. Deal, Springfield, Illinois.

Discussion Led by Dr. Roland Hazen, Paris, Illinois.

10:40 A. M. Intermission.

11:10 A. M. Standardization of Methods of Treatment in Orthopedic Surgery and in Industrial Surgery of the Extremities and Spinal Column. Dr. Robert B. Osgood, Boston, Massachusetts.

Afternoon Session

1:00 P. M. The Significance of Globoid Bodies and Their Cultivation by Newer Bacteriological Methods. Dr. William Thalheimer, Milwaukee, Wisconsin.

Discussion Led by Dr. John J. Seelman, Milwaukee, Wisconsin.

1:20 P. M. (Subject Announced Later.) Dr. David Fairchild, Jr., Clinton, Iowa.

Discussion Led by Dr. Alanson M. Pond, Presi-

dent-Elect, Iowa State Medical Society, Dubuque, Iowa.

1:40 P. M. The Physician as a Business Man. Dr. Charles L. Best, Freeport, Illinois.

Discussion Led by Dr. William E. Fairfield, Green Bay, Wisconsin.

2:00 P. M. The Newer Conceptions of the Relation of the Liver to the Problems of Abdominal Surgery. Dr. George W. Crile, Professor of Surgery, Western Reserve University School of Medicine, Cleveland, Ohio.

3:00 P. M. Cancer of Cervix and Rectum. (Plea for Less Radical Surgery.) Dr. Donald McCrae, President, Iowa State Medical Society, Council Bluffs, Iowa.

Discussion Led by Dr. Peter A. Bendixen, Davenport, Iowa.

3:20 P. M. (Subject Announced Later.) Dr. Horace M. Brown, Milwaukee, Wisconsin.

Discussion open.

3:40 P. M. Basal Metabolism. Dr. Joseph S. Evans, Professor of Clinical Medicine, State University School of Medicine, Madison, Wisconsin.

Discussion Led by Dr. Alfred W. Gray, Milwaukee, Wisconsin.

4:00 P. M. Intermission.

4:30 P. M. The Lessons of War Service for the Internist. Dr. Harlow Brooks, Professor of Clinical Medicine, University of Bellevue Hospital Medical School, New York, New York.

Evening Session

7:00 P. M. Removal of Acute and Chronic Fractured Os Calcis. Dr. Claude R. G. Forrester, Professor of Clinical Surgery, Chicago College of Medicine and Surgery, Chicago, Illinois.

Discussion Led by Dr. Robert A. Hanna, Peoria, Illinois.

7:20 P. M. Removal of the Adherent Placenta in Abortions. Dr. Charles E. Ruth, Des Moines, Iowa.

Discussion Led by Dr. Clifford U. Collins, Peoria, Illinois.

7:40 P. M. The Choice of a Cataract Operation. Dr. Harry W. Woodruff, Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College, Joliet, Illinois.

Discussion Led by Dr. Alonzo B. Middleton, Pontiac, Illinois, and Dr. Arthur L. Hagler, Springfield, Illinois.

8:00 P. M. Disorders of the Pituitary Gland. Dr. William Engelbach, Professor of Medicine, St. Louis University School of Medicine, St. Louis, Missouri.

8:45 P. M. Cancer of the Large Bowel. Dr. Carl B. Davis, Assistant Professor of Surgery, Rush Medical College, Chicago, Illinois.

9:30 P. M. Stereopticon Clinic. Tumor Formation in the Mineral, Vegetable and Animal Kingdoms. Commander William Seaman Bainbridge, M. C., U. S. N. R. F., Acting Operating Surgeon Brooklyn Naval Hospital, Consulting Surgeon Third Naval District, New York, New York.

Smoker.

Fourth (Last) Day—October 7, 1920

7:00 A. M. Diagnostic Clinic (Medical). Dr. Lewellys F. Barker, Professor of Medicine, Johns Hopkins University Medical Department, Baltimore, Maryland.

7:00 A. M. Diagnostic Clinic (Surgical). Dr. Harvey Cushing, Professor of Surgery, Medical School of Harvard, University, Cambridge, Massachusetts.

9:00 A. M. Painful Shoulder. Mechanics, Diagnoses, and Special Methods of Treatment. Dr. Paul B. Magnuson, Chicago, Illinois.

Discussion Led by Dr. Walter W. Greaves, La Salle, Illinois.

9:20 A. M. Focal Infection, with Special Reference to Chronic Arthritis and End Results. Dr. Walter L. Bierring, Des Moines, Iowa.

Discussion Led by Dr. William H. Rendelman, Davenport, Iowa.

9:40 A. M. The Medical Profession Safeguarding Americanism. Dr. Charles J. Whalen, Editor ILLINOIS MEDICAL JOURNAL, Chicago, Illinois.

10:00 A. M. Variations in Build of Body in Relation to Disease. Dr. Charles R. Bardeen, Dean and Professor of Anatomy, University of Wisconsin School of Medicine, President, Wisconsin State Medical Society, Madison, Wisconsin.

Discussion Led by Dr. Otto A. Feidler, Sheboygan, Wisconsin.

10:20 A. M. Intermission.

10:50 A. M. The Physician as a Citizen. Dr. Charles E. Humiston, Associate Professor of Clinical Surgery, University of Illinois College of Medicine, President-Elect of the Illinois State Medical Society, Chicago, Illinois.

Discussion Led by Dr. Edward Fiegenbaum, Edwardsville, Illinois.

11:10 A. M. The Human Breast. A Plea for Well-Directed Treatment, Based on a More Accurate Diagnosis. Commander William Seaman Bainbridge, M. C., U. S. N. R. F., Acting Operating Surgeon Brooklyn Naval Hospital, Consulting Surgeon Third Naval District, New York, New York.

Afternoon Session

1:00 P. M. Some Surgical Cases with a Lesson. Dr. Edward Evans, La Crosse, Wisconsin.

Discussion Led by Dr. John L. Yates, Professor of Clinical Surgery, Marquette University School of Medicine, Milwaukee, Wisconsin.

1:20 P. M. The Clinical Signs and Symptoms of Exophthalmic Goiter. Dr. Campbell P. Howard, Professor of Medicine, State University of Iowa College of Medicine, Iowa City, Iowa.

Discussion Led by Dr. John T. Strawn, Des Moines, Iowa.

1:40 P. M. Group Diagnosis and Therapy. Dr. Lewellys F. Barker, Professor of Medicine, Johns Hopkins University Medical Department, Baltimore, Maryland.

2:40 P. M. (Subject Announced Later.) Dr. Hubert Work, President-Elect, American Medical Association, Pueblo, Colorado.

3:40 P. M. Intermission.

4:00 P. M. The Special Field of Neurological Surgery. Dr. Harvey Cushing, Professor of Surgery, Medical School of Harvard University, Cambridge, Massachusetts.

BANQUET, 6:30 P. M.

Addresses by Dr. Hubert Work, President-Elect, American Medical Association, Pueblo, Colorado, eminent men of the profession who are guests of the Association, and other distinguished citizens of the United States.

The Presidents of the States Societies are: Wisconsin, Dr. Charles R. Bardeen, Madison; Illinois, Dr. William F. Grinstead, Cairo; and Iowa, Dr. Donald McCrae, Council Bluffs.

[Signed]

<i>Program Committee,</i>	<i>President,</i>
JOHN F. PEMBER,	GEORGE V. I. BROWN,
Janesville, Wis.	Milwaukee, Wis.
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Bloomington, Ill.	<i>Secretary,</i>
	DOMER G. SMITH,
	Freeport, Ill.

The physicians of Illinois are most cordially invited to attend the meeting and participate in the program.

EXCESSIVE STANDARDIZATION SUPPRESSES INDIVIDUALISM, DWARFS GENIUS AND CREATES A STANDARD DOCTOR

In an address by Franklin K. Lane, after he was recently granted an honorary degree of Doctor of Laws by Harvard University, he warned the country against over-industrialism and over-standardization, declaring that men of business have run mad and fostered standardization in trade and industry until the workman finds no chance for the expression of his own individual genius.

The late John B. Murphy, of Chicago, in an after-dinner address during a session of the American Congress of Surgeons in New York some years ago, called attention to the same thing, not only in medical education, but in the whole scholastic education of our children, and for this reason was a staunch supporter of the Gary system. He, too, maintained that excessive standardization suppresses individualism, dwarfs genius and creates a standard doctor with consequent decreasing instances of development of individual unusual talents. He believed that the medical school of several decades ago fostered individualism, which resulted in relatively larger numbers of men with unique ability.

If these are facts, they should not fail to influence for the better the broad plans in this period of reconstruction for the future development of American professional education and of American industry managed by men of outstanding ability in the large affairs of today. There is doubtless a very great demand

for the standardized product, but there is also a considerable demand for a product distinctly outside the standardized class and quality. It has been said that the separate endowment of men varying in intelligence, ingenuity and balanced judgment is a necessary constituent in the ore of mankind; to subject all this varying ore to the same process of reduction, to attempt to fit all men's powers into a Procrustean standard, is to attack common sense and to waste opportunity.—*Medical Record*.

THE ATTITUDE OF THE EPISCOPAL CHURCH THE HEALING POWER OF PRAYER

To the Editor: The letter signed by "One Who Wants to Know," in the April issue of the JOURNAL, unjustly criticizes the Episcopal Church and the recent Christian Healing Mission held at Grace Cathedral, San Francisco.

Mr. Hickson in his address to the sick, told them not to forsake their physicians, but to honor them with the honor due them, for the good work they are doing for humanity. But as every physician will admit, God is the ultimate source of all healing, and to the firm believer in God "all things are possible."

Mr. Hickson's method has no connection with psychotherapy, neither is it healing by mental suggestion. It is healing through the power of prayer, in obedience to the command of Christ "to heal the sick." Of course, to a person, who never prays, to the man whose spiritual life is atrophied, it may seem strange, but to the man of spiritual habits, *to the believer in Jesus Christ*, prayer is a mighty power.

There is no war between physical healing, as practiced by physicians and surgeons, and spiritual healing. There must be co-operation between those attacking evil from the physical side and those attacking it from the spiritual side. God works from both sides. Any broadminded doctor must admit that God does heal through surgery and through medicine. He does at times heal through mental suggestion. Yes, he *does* at times heal through the *power of prayer*. Instead of criticizing, let us as physicians and surgeons make greater use of the Power of Prayer. It will make us better physicians and surgeons. From

"ONE WHO KNOWS."

June 25, 1920, San Jose, Calif.

C. S. J. of M.

TRUE OBJECT OF HARRISON NARCOTIC LAW

(*United States vs. Parsons*, (U. S.), 261 Fed. R. 223)

The United States District Court, District of Montana, says that the Harrison Narcotic Law is ostensibly a revenue measure, and within limits, the courts must recognize it as such. At the same time, any one with sense enough to be at large without a keeper knows that the revenue feature, which possibly returns cents for dollars spent in administration, is only a fiction and device to enable Congress, otherwise disabled to suppress opium traffic and use, to hinder and

obstruct such traffic so far as may be done incidentally to the exercise of revenue power. It is one of many like and regrettable devices to evade constitutional limitations, to impose duties of the states on the United States, and to vest the latter with nondelegated and reserved police power of the former. The limits are that, if in any such measure Congress incorporates arbitrary and unreasonable inhibitions, in that they are not calculated to promote the revenue features, but intended to promote some object not within congressional power, to that extent the statute is unconstitutional and void, and the courts are bound so to declare it. Section 2 must be construed to be in aid of the only object of the act that is constitutional, namely, to create and safeguard revenue. Nothing in Section 2 forbids purchases for any lawful use. Among such may be purchase to destroy, to absorb the supply, to prevent purchase by others, or to obstruct illegal traffic, all of which are lawful purposes, and none of which are within Section 2, even as purchase for personal use is not; and a demurrer is sustained to an indictment that charged purchase for personal use.

J. A. M. A.

A REMARKABLE CASE OF APPARENT DEATH

Rautenberg reports the case of a nurse, aged 23, who, October 27th, 1919, took in one dose 26 grains of morphine and 75 grains of veronal. When found in the park next day life was almost extinct. She was thought to have died in the ambulance. The indications of death were: Rigidity; intense pallor; absence of reflexes, pulse, respiration and heart beat. Hot sealing wax gave no skin reaction. After fourteen hours in the morgue, an official desiring to identify the body, the coffin was opened. The cheeks had a purplish tinge, and the larynx moved slightly. There were no respiratory movements nor pulse beat, but muffled heart sounds were audible. At 10 a. m. the patient was taken to the hospital. Camphor and caffeine were given subcutaneously and stomach lavage was done. A hot bath was given and a flesh brush was applied vigorously, with artificial respiration and oxygen inhalation. At 11 a. m. the pulse could be felt, and short, jerky inspiration was noted. Rigidity of the limbs abated. At 12 the pulse was above 50. October 30, the patient regained consciousness and made a few statements. There were no signs of pneumonia, but persistent leukopenia was present.

How is it possible for a human being to live more than twenty-four hours without respiration and blood circulation? Ratenberg explains the strange condition as due to the effect of the narcotic and the cold which, acting together, brought about a paralysis of the vasomotor nerves and thus reduced the needs of the body to a minimum, the narcotic paralyzing the central nervous system, and the cold effecting the rigid paralysis of the organs. He thinks the cold may have prevented rapid resorption of the alkaloid. The condition was similar to that of hibernation of animals, and this fact tided the organism past the danger of pneumonia.—*J. A. M. A.*, March 20.

MAGNESIUM SULPHATE AS AN ANTISEPTIC

The fact that a saturated solution of magnesium sulphate has been used during the recent war as an antiseptic dressing for wounds, and also that it is employed externally as a dressing in erysipelas, makes all investigations as to the method of its action of peculiar interest.

Northrup in the *Journal of Infectious Diseases* for February, 1919, states that women have known for some time that a saturated solution of magnesium sulphate may be used as a substitute for talcum or face powder, and that a small amount of this liquid taken in the palm of the hand and rubbed over the face until dry leaves a "bloom" upon the skin, and that if there is a tendency to pimples these dry up and disappear. This led Northrup to investigate the influence of magnesium sulphate on the organism commonly found in ordinary pimples, the staphylococcus aureus. It is not necessary to give the details of this research, but it would seem that magnesium sulphate does possess distinct antiseptic power not only in regard to the staphylococcus, but also that this salt inhibits the growth of the streptococcus in the skin.

This investigator also quotes Morison and Tulloch in regard to its effect upon the staphylococcus pyogenes, and states that these authors also found that magnesium chloride might be used advantageously in place of magnesium sulphate in that it seemed in some cases to possess more power.

Northrup, therefore, suggests that a further study of the specific action of concentrated solutions of magnesium sulphate, and other magnesium salts, on infected skin, or in wounds, may present interesting results.

FIFTEEN MILLION PEOPLE DIED OF INFLUENZA

According to a survey made by the Metropolitan Life Insurance Company, a total of 15,000,000 or practically 1 per cent of the entire population of the globe died of this disease previous to 1919.

WHERE WESTERN MEDICAL WOMEN CAN FOLLOW THE "URGE"

The young medical student who is eager to find a field for real service could choose no better location than China, where the need for medical service is alarming. In spite of the worthy efforts of the 265 mission hospitals which have developed in the last few years, the medical college graduate who has a burning desire to explore virgin fields of medicine cannot afford to disregard the call from the Orient.

The especial call of the East is for women physicians and if the West limits the scope of the activities of medical women, the East is ready to receive her literally with open arms. Any woman with public health training can find in China a field of work greater than that covered by the combined departments of public health in New York, Philadelphia, Chicago and Boston.

A second field for American medical women is offered in orthopedic surgery. The pitiful effects of spinal tuberculosis as seen in the Chinese children are sign-posts pointing a straight way for the orthopedic specialists. Since the Chinese are especially susceptible to tubercular infections, these tubercular children's cases form the largest percentage of cases in woman's hospital.

Sometimes the fate of a nation is decided within the walls of a laboratory. This field of medical science has been sadly neglected in Oriental hospitals and medical schools, for laboratory workers are all too scarce in China. There is so great an opportunity for pioneer work in this field that a Pasteur or a Koch would have yearned to explore these fields. Many of the hospitals have been fitted with X-ray machines, autoclaves, and similar laboratory equipment, but they are useless without the workers. Even one such thoroughly trained worker could do more to advance the medical science of China than any other agency.

The newly established medical schools for women offer attractive teaching opportunities for American medical women. In the schools at Canton, Hankow, Nanking, Peking and Foochow, the staff carry on efficient work in spite of the fact that the standard is not an especially high one. The Hackett Medical College for Women at Canton every year graduates earnest young Chinese women who will improve the health condition of their country. Representatives of the Interchurch World Movement, who have covered the medical field in their survey, report that the Chinese women physicians need the advice and helpful service which their American professional sisters can give.

The need for American workers in this eastern country cannot be overestimated and it is in China that our earnest young American women can find a field of service which shall fulfill their every desire. —*American Medicine*.

WASSERMANIA

C. L. DEMERITT, M. D.

HOBOKEN, N. J.

I use this rather slangy term, the best I can invent, for a new and hitherto unnamed psychosis, having a close but undetermined relation to syphilis. Wassermania is a mental state characterized by the delusion that the health, the happiness, in fact the whole existence of syphilitic patients hang entirely on the results of frequent Wassermann tests of their blood. Its etiology is obscure. The spirocheta pallida does not play any direct part, for the condition is often found in people with negative Wassermans and with no history or clinical evidence of syphilis. Cases of this sort are especially common among medical men. Indeed, the psychosis often starts first in non-syphilitic doctors and is communicated, by them, to their syphilitic patients.

My theory is that it is spread by a miasma, emanating from the intellectual fog surrounding certain pseudo-scientific medical circles where physical exam-

ination and clinical experience are discounted in favor of supposed short-cuts to diagnosis and prognosis.

I am not trying to be funny with the laboratory man. I think he holds the highest position in our profession. His patient and poorly paid work is the basis of medical progress. The benefits dispensed by the clinician are mostly the practical application of laboratory discoveries. This very fact makes it the clinician's duty, to the laboratory man as well as to his patient, to read laboratory findings in the light of common sense. The careless worker in medicine ever looks for a scapegoat, and the blame for many a wrong diagnosis or treatment is shifted to some laboratory worker, whose correct report only needed co-ordination with equally good work by the medical attendant.

One of the worst things medical pioneers have to contend with is exaggeration of their work by enthusiasts. After the announcement of something really good, comes a flood of "reports" in which the cant term "miraculous results" is apt to figure. Now it is a sad and disquieting thing to hear a twentieth century M. D. talking about miracles or near-miracles. However, we swallow the stuff. Then, when the inevitable reaction comes, the discovery is underrated for a time, and so it may take years to teach the profession its real use and value. Arsphenamine went through this rapidly. Today, we are pretty well agreed as to its real worth. The Wassermann test is taking much longer.

Prophylactic treatment of Wassermania is of first importance. On taking charge of a case of syphilis, I tell the patient, who generally has a hazy idea of the "blood test," as follows: "The Wassermann test is only one of a number of things to be considered. Its importance is overestimated. I shall use it or not, as I see fit. You are not to worry about it. No number of negative Wassermann's can be taken as proof of cure. I do not promise to eradicate the last syphilitic germ from your body. I shall work to arrest the disease. If you take my treatment it is reasonably certain that you will have no more signs of syphilis, that any children you may have will be healthy, and that you will die of some other disease than syphilis. No one can honestly offer you more."

A candid statement like this impresses a sensible man more than promises of forthcoming wonders. His confidence is gained. The knowledge that he has to make a long, hard fight, with some probable ups and downs, but with the odds in his favor, nerves him to practice control of mind, as well as of body, and he goes through his trial with calm determination. Even a positive Wassermann, for I do use the Wassermann test, does not upset him. What a contrast to the poor Wassermaniac, whose joy over a negative report quickly gives way to the haunting fear that the next one will be positive!

In some advanced cases of Wassermania, both blood tests and arsphenamine must be forbidden. For example: A lady, thirty-seven years old, came to me four years ago with syphilis of seven years' standing, during the last three of which she had been treated

by a medical Wassermaniac. In spite of about a dozen arsphenamines and some, but not enough, mercury, her Wassermann would not stay negative. She had some squamous syphilids and, quite naturally, a trace of albumen and a few casts in her urine. She was thin, worried and hopeless, a psychic castaway, a burden to herself and others.

She handed me a bundle of Wassermann reports ranging from negative to four plus. "It's no use," she said, "my blood will not stay right. I am incurable."

I said: "All right, think so if you like. But understand, if I take your case, you are done with 606 and blood tests. They are of no more use to you. They only torment you. Forget them." After six intramuscular injections of metallic mercury, she had gained ten pounds, her skin and urine had cleared up, and she was taking an interest in life.

Later, I removed both ovaries and the corpus uteri for cystic ovaritis and fibroids, with hardly any psychic disturbance following. Today, she is living an active and useful life and has to be reminded, now and then, that it is time for another course of mercury.

A young male syphilitic came to me recently from a New York clinic noted for its shameless prostitution of charity, where, though quite able to pay, he had been treated gratis. He had had over twenty arsphenamines. He had a three plus Wassermann and nephritis, although, just before being infected, he had passed a life insurance examination. The infatuated "professor" at the clinic, who had not made one urine examination while all this arsenic was being pumped into him, was proposing another course of arsphenamine.

To the medical Wassermaniac, the general mental and physical condition of syphilitic patients is of no account and syphilis itself is merely an incidental feature of the Wassermann reaction. From his disordered point of view, the only thing that counts is a negative Wassermann.—*J. of M. S. of N. J.*

A REMARKABLE ANTISEPTIC

DOUGLAS MACFARLAN, B. Sc., M. D.

PHILADELPHIA, PA.

The host of antiseptics and their champions are innumerable and will probably continue to be so until the end of time. However, there is little reason for the "every-day" practitioner to have more than a few of these well understood for his general use. The relative antiseptic value of the commonest germicides has been conclusively established and a preference now should only be expressed on account of the various adjunctive effects of the drugs selected.

The table compiled by William H. Park of the New York City Health Laboratories is very comprehensive and gives at a glance the relative germicidal merits of the common antiseptics.

TABLE OF RELATIVE ANTISEPTIC VALUES

Alum	1:222
Alum Acetate	1:6,000
Am. Chloride	1:9

Boric Acid	1:143
Calc. Chloride	1:25
Calc. Hypochlorite	1:1,000
Acid Carbolic	1:333
Chloral Hyd.	1:107
Cupric Sulph.	1:200
Ferrous Sulph.	1:200
Formaldehyde (40 per cent).....	1:10,000
Hydrogen Peroxide	1:20,000
Mercuric Chloride	1:14,300
Mercuric Iodide	1:40,000
Formaldehyde (Pure)	1:25,000
Silver Nitrate	1:12,500
Thymol	1:83

By this table, the red iodide of mercury appears by far the strongest. It is with a solution of this salt that the following notes deal.

Red Mercuric Iodide, HgI_2 , is readily soluble in aqueous or alcoholic solutions of Potassium iodide and a new salt is formed, the double iodide of Mercury and Potassium, K_2HgI_4 . If the solvent solution is too weak in KI, the yellow crystals of this salt separate out. For practical purposes, and to insure its permanence, approximately twice as much KI as HgI_2 is added. The strength of the solution is roughly judged by the amount of red iodide of Mercury used, for the excess of KI is actually an indifferent factor. For one per cent solution, the following formula will suffice:

Px.

Merc. Iod. Rubr.....	1 gm.
Potas. Iodidi	2.5 gm.
Aq. Destil.	100 cc.

The two important factors in having a permanent solution are the use of distilled water and plenty of KI.

Experiments were made to see the exact antiseptic value of the solution, with the following results:

In the first series, a hardy strain of staphylococci was used, and these found it impossible to exist in media where the double iodide was present in dilution of 1:80,000. In 1:100,000 media, three small colonies were observed in one plate and in another of the same dilution, a scattered half-dozen were present. Above these dilutions, the cultures became progressively more prolific.

Again, with a strain of typhoid bacilli, approximately the same results were obtained. In the neighborhood of 1:80,000 the solution was germicidal; from 1:80,000 to 1:100,000, growth was inhibited.

As to practical use, there is every evidence to believe, and the results are assuring, that this new antiseptic is as strong in practice as in experiment. As may be imagined, its use was first tried on microbic affections of the skin, and upon these it was found to have a marked effect. Long-standing acne, cryptogenic infections, erysipelas and, in fact, the whole realm of superficial skin infections respond remarkably to its action. On erysipelas, the most rapid results are obtained, a fact which has been verified in repeated instances. When the deep-seated inflammations, such

as boils and felons, are met with, there seems to be much evidence of some power of penetrability, which the drug possesses. A wet compress applied in such circumstances alters entirely the prolonged progress of these cases. The indurated, tense tissue rapidly subsides in its acute inflammation and the pus begins to "point." A one per cent solution is to be considered very powerful in such cases, anything stronger being both unnecessary and liable to irritate. The tendency with this antiseptic is to use it too strong, but this is, in a measure, safe-guarded by its comparatively low irritating qualities. The solution being clear, colorless and odorless, the senses are deceived into presuming impotency. These points are well understood when it is realized that a dilution of one in eighty thousand is germicidal, and that a one per cent solution may be used on the skin with seldom any irritation.

It is this last fact that makes this drug such an ideal antiseptic for surgical clinics where hurried, careless work is at times seen. There is little danger of harm being done from the making up of the solution from a one per cent stock jar, for at least nothing stronger than one per cent can be made, while on the other hand there is still wide latitude for dilution. Much more could be said in enumerating different conditions where this antiseptic can be applied. Suffice it to add that it is thoroughly reliable in whatever germicidal capacity it may be used. A most casual trial will show its virtues and to this trial its remarkable qualities most earnestly recommend it.—*Charlotte Med. Journal.*

DECEPTION AND SELF-DECEPTION, IN THE PRACTICE OF MEDICINE

To the Editor:

I am coming up against both these unfortunate conditions frequently. It is very hard both for patient and doctor, I mean especially, the general medical adviser of the patient. If the physician wishes the best interest of his patient, as he does and should, he seeks the best medical or surgical advice, if he is at fault, or even when he believes he knows and that a consultant's judgment will confirm his own. When this has proved to be true, the wise doctor does not consider it often wisdom to consult in behalf of his patient a third physician, who has special knowledge in the direction of that disease which has been determined to exist by the two previous physicians. Still he is apt to yield to an expressed wish on the part of the patient and it is done. Sometimes, there is practically accord between the three physicians; sometimes, the specialist differs from the others. Then we must have a fourth physician, also a specialist, meet the others in consultation, and after hearing their opinions, he either agrees or disagrees. If he agrees, well and good; if he disagrees, a fifth physician must be called in, and here again there may be equal division of judgment, or it may be three against one. In the former case, matters are settled, at least, for a while; in the latter case one is again unsettled,

or else, perhaps, the patient abides by the opinion given originally by his own physician.

Such a condition of affairs, as I have briefly portrayed, is today not infrequently encountered. The net result is sooner or later to have a neurasthenic patient who believes no one and is bandied around from one specialist to another. Finally, the good, square, all-around physician becomes weary of well doing and soon wishes to throw up the case or does so. Meanwhile, has he received proper pecuniary return for what in reality are very valuable services? As a rule, no. The consultants, general or special, get their remuneration; he does not. Gratitude is much talked of and probably given for a while. Ultimately he is regarded as unsympathetic or almost cruel, and in place of a firm and loyal patient and friend, he has neither.

I have related the foregoing from actual experience, repeated several times in a decade or less, and by its narration I wish to illustrate what I mean by deception and self-deception in the practice of medicine. The doctor may be of the sort who feels obliged, by what to him are major considerations at the time, to go on almost without time limit, pandering as it were to what he knows is purely an effect on the neurones, such as we find in neurasthenia and hysteria, and in so far as he does so, after awhile he deceives his patient. The patient is self-deceived by his disease and it is often problematical how he or she will become undeceived. In my judgment, he is sometimes never undeceived; fortunately, in other instances, the patient finally and as a last resort reaches the conclusion that his own original physician, faithful, true, conscientious and unrewarded, is in reality correct. Why should clever, hard-working, conscientious men embark and continue in the general practice of medicine at the present time? Cui bono? I cannot answer; perhaps the editor, or maybe someone who reads these lines, can and will.

BEVERLEY ROBINSON, M. D.

New York.

Medical Record.

THE PSYCHOLOGY OF PROHIBITION

Early reports, chiefly tentative and more hopeful than accurate, led to the belief that prohibition was working out amazingly well. From many sections of the country came rumors of the splendid effects of the Eighteenth Amendment, the prosperity it was bringing about, increased savings accounts, decrease in crimes, the disappearance of unemployment, and the revival of home life. All these reports were welcomed by *American Medicine* and appreciative comment was expressed in these columns, despite pre-prohibition anticipations of the evils that must necessarily follow a rash and ill-administered perversion of what might have proved, if more wisely conceived and more moderately executed, a beneficial undertaking. And these reports were welcomed in spite of the fact that they showed our power of prediction of no value. We had repeatedly warned the authorities and the fanatics against a sudden and violent

change in the habits of men, quoting facts and figures in previous ill-fated attempts of a similar nature. For a time it seemed as though we were to be exposed as scare-mongers and pessimists. Regretfully now, however, we are obliged to acknowledge that these warnings were not exaggerated and were well justified by previous experience. It gives us no pleasure to admit that we were right. Later and better balanced reports of the operation of the Eighteenth Amendment reveal a state of affairs regrettable in the extreme and not a little alarming. The recent exposure of wholesale traffic in liquor in New York, despite the watchfulness of government agents, is an appalling revelation. The statement of an authority that never have the delirium tremens wards of our hospitals been so crowded is a disheartening announcement. But to many men the situation is not a surprise. Those familiar with the psychology of prohibition were prepared for such an eventuality. This psychology is elemental and inevitable and it has operated in the usual way; those of moderate habits have come to resent bitterly an infringement on their liberty which they never abused and those whose excesses the law was especially expected to curb have been driven to even greater excesses. Many men, in fact, who never found liquor a necessity, now that it has become a forbidden article have suddenly found that they must have it and have gone far and wide to seek it. There is nothing surprising in this. Those who found it indispensable now find it even more indispensable. That, no doubt, explains the enormous consumption of liquor the revelation of which comes as such a surprise in some quarters. Yet it has been obvious from the very start that prohibition was not prohibitive. At all times it was possible to obtain the forbidden spirits if the price was forthcoming, and the net result of the amendment was the enrichment of liquor dealers and the impoverishment of the consumer. A most significant fact in the whole situation is the present reduction in the price of drinks—a manifest acknowledgment that consumption has increased and that the dealers are having less trouble in getting rid of their product. All this despite raids and revelations and denunciations. What are the authorities planning to do? Already the cost of maintaining a staff of revenue officers and detectives is very high. It is estimated that to enforce prohibition effectively will cost the government two billion dollars a year. Even at that price it is doubtful whether the end desired can be achieved. Will these facts rouse the prohibitionists to a realization that they have gone about the problem in the wrong way? We sincerely hope so.—*American Medicine.*

Public Health

THE ILLINOIS BETTER BABIES CONFERENCE.

The Better Babies Conference conducted by the State Department of Public Health in connection with the Illinois State Fair this year is said to have been the largest and most successful undertaking of the kind

ever carried out in the middle west, if not in the nation. About nine hundred babies were entered all of whom were completely examined and rated by a medical staff of thirty-five physicians and seven dentists.

In addition to the classes or groups arranged by age periods for regular competitive rating, there were non-competitive classes and classes made up of children rated at previous conferences and who were presented for comparative studies and to determine the degree of improvement and development. A consultation staff was at all times available so that parents could obtain advice and guidance in the care of their children and particularly in overcoming the defects which were brought to light in the conference examinations.

COORDINATION OF ILLINOIS NURSING SERVICE.

As a result of the conferences between representatives of the Central Division of the American Red Cross, the Illinois Tuberculosis Association and the Director of the State Department of Public Health, a plan has been adopted whereby public health and community nursing service throughout the State will be coordinated under the general supervision of the State Department of Public Health.

Under this arrangement provision is made for the participation of all future agencies which may engage in nursing service on a state-wide basis.

While the state supervising nurse and the two assistant supervisors will constitute a board to deal with details of all nursing service, there will be a standing committee to determine broad policies and programs made up of the State Director of Public Health, the president of the Illinois Tuberculosis Association, and a designated representative of the American Red Cross.

BIRTH REGISTRATION IN INSTITUTIONS.

Through an agreement between the State Department of Public Health and the State Department of Public Welfare, an effort is being made to secure more complete reporting of births in all public and private hospitals, maternity homes, sanitarium and other institutions.

COUNTY TUBERCULOSIS SURVEYS AND CLINICS.

During the month of August a large group of nurses from the Chicago School of Civics and Philanthropy have been placed in counties having no established community nurse service for the purpose of making tuberculosis surveys and of holding tuberculosis clinics in conjunction with county medical societies. During the last week of the month clinics were held in all of these counties, special meetings of the county medical societies being called for that purpose. The attendance on the part of physicians has been uniformly large and, in some communities, as many as a hundred persons have presented themselves for examination, most of these patients being referred by the local physicians from their private practices.

In six of the counties the attendance was so large

that the county medical societies have requested additional clinics be held during the next few months.

Society Proceedings COOK COUNTY

CHICAGO OPHTHALMOLOGICAL SOCIETY

Meeting of Nov. 17, 1919—Cont.

Drs. Joseph C. Beck and Emil Deutsch presented a report on the "Interrelation Between Eye, Ear, Nose and Throat Cases."

DISCUSSION OF THE CASES OF DR. BECK

Dr. Robert Von Der Heydt said the case of neuro-paralytic keratitis following injection of the Gasserian ganglion was interesting. Cases that did not follow this operative procedure were very rare. He had one last year at the infirmary and Dr. Lane saw it with him. It was practically the only case they ever saw of neuro-paralytic keratitis that was not produced by operative procedure, proving their rarity.

He asked about the vision in the other eye, of which this girl complained. She said that for a time she saw poorly in the other eye. He wanted to know the ophthalmologic diagnosis of the condition in that eye. For instance, if there was no lesion found there, this would possibly bear a little heavily toward a psychic diagnosis for the original trouble.

Dr. Deutsch said there was no characteristic diagnosis of the condition of the left eye. Vision in the left eye is now 20/25 with glasses—a myopic eye.

Dr. Von Der Heydt said the patient said she had symptoms of reduced vision in the left eye.

Dr. Deutsch replied that she lost sight in the left eye and it returned recently.

Dr. Emil Deutsch said there was nothing unusual in connection with the next case. It was one of typical interstitial keratitis except that it took an ophthalmologist to diagnose the deafness.

He believed Dr. Beck stated when the patient presented herself at the hospital that no lesions could be found in the nose or throat. This patient came in at the time Dr. Beck was in France, and the speaker happened to be present. She complained of three months' deafness gradually coming on. On examination Dr. Pollock found enlarged tonsils and adenoids, and as many cases of deafness had been reported as having cleared up following the removal of enlarged tonsils and adenoids, he removed them and found after waiting a few months her deafness persisted, and then he concluded it might be a case of oto-sclerosis and took an X-ray picture which, however, showed negative. The father and mother being under Dr. Pollock's care for some time, and she was an adopted child, he did not think of syphilis at all. He had in mind oto-sclerosis. They gave her a therapeutic test, injected adrenalin, and so on, to see if that would improve the condition. They had given fourteen or sixteen adrenalin injections which showed occasional improvement in hearing until she presented herself with a sore eye and complained of something in it. One of the internes diagnosed the condition as conjunctivitis and gave her argyrol to use. The patient returned within three days with hearing very bad and her eyes getting worse. He was called to see the case then and made a diagnosis of interstitial keratitis, for the reason that in the posterior surface of the cornea there was an apparent opacity, vascularization distinctly seemed to be worse than ever before. He recalled a statement made in one of the textbooks that during the stage of interstitial keratitis the hearing, if due to lues, was always worse. So in looking over her physiognomy for characteristics of lues, the nose, forehead, face and teeth were all negative, and she had no symptoms which would lead one to suspect a luetic condition. Spinal puncture was made and without waiting for the result of laboratory finding they gave her small doses of neosalvarsan with the result that her hearing began to improve until today she had about six or eight injections. Her hearing was practically normal now.

As to the eye he could only say that interstitial keratitis, as

believed, under neosalvarsan was not very successful. The administration of neosalvarsan in her case proved very beneficial because she could not tolerate any form of mercury nor iodid of potassium. The interstitial keratitis and hearing cleared up nicely by this treatment alone. Her vision was 20/50, had gradually improved, and the central opacity in the cornea might clear up further.

Dr. Thomas Faith asked why it was not possible to differentiate with the tuning fork between this case of nerve deafness and one of oto-sclerosis at the first examination.

Dr. Beck said that this case was not under his care, and he did not see the case and did not make any diagnosis. The case was under the care of Dr. Pollock who asked to present it as a blunder in diagnosis and of great value to the ophthalmologist. It was true, we could and did make the diagnosis between oto-sclerosis nerve deafness as a rule by tuning forks.

Dr. Clarence Loeb in connection with the first case, that of neuro-paralytic keratitis, reported a case he saw at the Michael Reese Dispensary of a woman, 40 years of age, who presented herself with ptosis on the left side, and the only history he could obtain from her was that it followed shortly after injection in the cheek for neuralgia. It occurred to him, if this case was the result of the injection of alcohol the operator must have taken quite a roundabout way to get the third nerve, and it seemed to him it should have produced more destruction in its path than it did.

He asked some of the members to speak of the possibility of such a condition following the injection of the Gasserian ganglion.

Dr. George F. Suker, in reference to the nerve case, asked whether it was one of hereditary or acquired lues?

Dr. Deutsch replied there was no history of hereditary lues, nor of acquired syphilis. There were two other children in the family, both of whom were well.

Dr. Suker was inclined to think it must be hereditary and asked whether a careful examination of the teeth was made.

Dr. Deutsch answered yes, at the beginning of her visit at the office and they were reported to be negative.

Dr. Suker said that in these cases examination of the teeth usually disclosed the characteristic syphilitic markings in the six year molars—the Darier-Fournier-Hutchinson molar. This patient showed such molar markings. Perhaps the deciduous teeth showed these syphilitic markings, and if so, then the permanent incisors frequently escaped the characteristic markings. Furthermore, he asked whether or not the patellar reflexes were taken in this case.

Dr. Deutsch said he did not recall.

Dr. Suker said the patellar reflexes in interstitial keratitis were more or less reduced, but never entirely absent. The interesting feature in this case to his mind was the fact that this condition had cleared up under neosalvarsan treatment. He would necessarily take it to be the parenchymatous or nodular form of interstitial keratitis, and not the striated or linear type. The striated type was not affected by any form of anti-leucic treatment one might institute. Scrapings of the cornea in the parenchymatous or nodular type in dark field illumination, often showed the spirochetes and in such cases antisyphilitic treatment was of special value. In the striated interstitial keratitis general supportive constitutional treatment was just as good as any if the eye was the only active lesion of an apparently quiet inherited lues. The local treatment in both types was the same.

He asked Dr. Deutsch whether or not he considered neuro-paralytic keratitis in the true sense, a trophic disturbance.

Dr. Deutsch answered, yes.

Dr. Suker said that up to the present time no trophic nerve fibers had been isolated, i. e., fibers governing nutrition pure and simple. As this was still a mooted question, therefore in his judgment neuro-paralytic keratitis, as such, was somewhat of a misnomer. The fifth nerve was not necessarily the one which carried the nutritional fibers as far as we knew. Howell, of Baltimore, who was one of the most expert physiologists we had, was not at all sure that the fifth nerve carried so-called nutritional fibers. That it was a trophic disturbance in the true sense of the term nutritional—yes, but that these changes

were due because of so-called nutritional nerve fiber involvement—no.

He asked Dr. Beck why he did not consider the advisability of doing a decompression under a local anesthetic. If he had resorted to such, the result might have been somewhat different. One could do very large decompressions under apothesis without any pain whatever. It was not unusual for patients, with face down, under a general anesthetic to have respiratory difficulties which did not necessarily obtain when the operation was done under a local anesthetic, like apothesis.

Dr. A. A. Hayden stated that in the first case of neuro-paralytic keratitis Dr. Beck was particularly fortunate in having so favorable a result as he had in regard to the right eye.

The speaker had had the opportunity to see at least one case of neuro-paralytic keratitis following injection of the Gasserian ganglion with alcohol in which removal of the eye was necessary. The case of nerve deafness in the little girl seemed to emphasize the importance of always making a Wassermann test, preferably a spinal Wassermann for nerve deafness.

In regard to the case whose brain was on the table, the hearing was absolutely gone on that side. He suggested that, instead of turning tests to establish the function of the labyrinth, that caloric tests be made, as they would have been much easier to make and much less distressing to the patient.

Dr. Edgar asked Dr. Beck how extensive an operation he did.

Dr. Beck, in closing, stated that in all these cases of intranasal sinus operations, it was important to remove the middle turbinate and completely remove all ethmoid cells from forward back to the end of the last cell. The sphenoid sinus was probed. The natural antral opening was determined and the frontal sinus was probed. No curettement or operation was done on any of the sinuses themselves.

Dr. Suker spoke of using a local anesthetic. He wished he had done the operation under local anesthesia, but it was not possible to have the consent of the patient or that of her husband to do so.

As to the mobility of the tumor, he looked up the literature and neither Sir Victor Horsley or any of his associates of England, nor Cushing of this country reported any case of such looseness of a tumor as shown in this case. He reported three or four years ago his own brother's case (Dr. Rudolph Beck), in which at the post-mortem examination, made by Dr. Herzog, the tumor dropped out of its own accord as he (Herzog) removed the brain, but there was an attachment by a pedicle which had torn away. This tumor was loose and it could be explained how in the change of position of the patient pressure on a vital spot or center could take place and cause death. Whether it did or not, he did not know.

Dr. Hayden spoke of the caloric test. One could not determine the exact function with hot or cold water, he could only determine the function of the labyrinth but not the retrolabyrinthine part of the nerve.

In reference to ulceration of the cornea following Gasserian ganglion operations or injections he had seen two cases in which not enough care was taken in the protection of the eye, and the probabilities were there was a primary infection of the eye.

In regard to the Wassermann test, the point was well taken, and might he say that for himself he had established the rule of making a routine Wassermann in all cases newly admitted, and was astonished in some cases to get a positive Wassermann and respond to treatment when he least expected it.

RETINITIS PROLIFERANS

DR. RAYMOND R. HARRINGTON (by invitation) reported this case. The patient, Peter M., aged 25 years, presented himself to the Illinois Charitable Eye and Ear Infirmary, August 1, 1919, and was admitted to the Remmen Service. The speaker was the first one to see the patient and to examine him. About eight months ago, while over in France, he was wrestling and during the engagement he became suddenly totally blind in the left eye. He did not report the incident to the medical men in charge for fear

of not being permitted to go to the front. Several days thereafter he told a physician friend of his and was advised to take K. I. Vision was totally absent for several months and he was discharged from military service by memorizing the chart.

Examination revealed O. D. 20/15; O. S. 20/40; tension O. D. 23- O. S. 2D. Cocain Hcl 4 per cent. was instilled into each conjunctival sac until full dilation was present. Examination of the right fundus showed the disc very well outlined, veins and arteries clearly perceptible, white lines prominent, vessels clear and distinct, the region of the macula clear and distinct. Examination of left fundus proved more interesting. The first view obtained showed a large white crescentic line running from below the disc, across the disc and at temporal disc outline, branching off into a Y-shaped affair. The disc itself was perfectly clear, with a 2.00 D lens. Veins of normal proportion, arteries the same, white lines showing very clearly. The fundus was very much infiltrated with hemorrhages, but there seemed to be none in the region of the macula, which was perfectly normal.

Patient was seen once more but failed to appear again. No diagnosis was made at this time except a tentative one of rupture of the choroid. No blood vessels appeared over this white line, but one could see them go to the border and then reappear on the other side.

On November 5, 1919, patient again came to the dispensary claiming that it appeared to him as though a veil were thrown across the right eye. At that time vision was O. D. 20/15; O. S. 20/30; no pain. Blood pressure, systolic, 125; diastolic, 70; Wassermann, 100 per cent. negative. The eyes were again dilated with cocain and homatropin. Fundus of right eye normal and same in appearance, as when the speaker saw it last August. Fundus of left eye showed hemorrhagic spots practically absent; macula clear but the white line or band still present and of same size and character. This time both band and disc were clear—2 but when A + 6.00 was used band was brought away forward and was very distinct, while disc was away back and hazy. Upon close examination with a + 6.00 there was only one minute blood vessel crossing band and that was close to the disc. The other vessels seemed to run under.

Patient was refracted under homatropin and cocain.

+ 1.50 + .50
Retinoscopy shows + + while trial case
 + 1.50 + 1.50
 Not deducted
shows — O. D. + 1.00 O. S. — 25 Manifest post
 cycloplegic
gives O. D. + 50 — 20/20 O. S. — 50 — 20/20

Patient is wearing glasses and seems perfectly comfortable. In this case the speaker was unable to elicit a retinitis (vasculitis, or perivasculitis) as so many authors claimed to exist before a retinitis proliferans occurred.

COLOBOMA OF THE SCLERA AND HERNIA OF CHOROID

DR. HARRINGTON also reported this case. Patient, aged two months, was brought to the Infirmary by a visiting nurse. The baby was born August 1, 1919; normal delivery, after eight hours of mild labor. Ever since birth the mother had noticed a small tumor mass on the right eye to the outside of the pupil. At times, the mass seemed larger than at other periods, more so when the baby cried.

Child was well nourished. Tension in both eyes equal and normal O. D. Small tumor mass on right corneal scleral margin, about 10 mm. in the horizontal direction, and about 8 mm. in the vertical. Mass was of an epithelial character; no external growth of hairs. Neoplasm was not hard nor soft; it moved in any direction, even though it seemed to be partially attached to the cornea. Pupil responded to light; ciliary body intact. Diagnosis a dermoid tumor. Operation and removal of the tumor was advised, to which the mother readily gave her consent.

The baby was placed on the operating table and cocain 4 per cent. administered. The tumor was strongly adherent to the cornea and also to the scleral conjunctiva, but a distinct attachment to the same. Dr. Lebensohn and the speaker decided to begin the operation by removing the mass from the corneal surface. Slow sharp and blunt dissection was resorted to; the hemorrhage was profuse; they dissected the tissue about 2 mm. from the corneal scleral margin, when the color underneath changed from a white glistening one to a light blue. At first, they did not know what was before them, then decided it was the choroid, and as the baby was moving around to such an extent that minute operation was impeded they thought it best that a general anesthetic be given. Light ether narcosis was produced, and again the operation proceeded. The covering was slowly dissected up and now choroidal tissue was plainly seen. The remainder of the sac was easily dissected off, and now one could easily see an absence of sclera and hernia of the choroid. They could easily reduce the hernia but found the coloboma was so great the edges could not be coaptated; too much tension was deemed out of the question as they might alter the fundus condition. The conjunctiva on either side of the hernia was dissected back for about one-half inch and a mattress suture applied. Then the overlapping edges were brought together by interrupted sutures. Bichlorid ointment was applied and pressure bandage. The eye remained covered until three days after the operation, when bandage was removed, and there was no inflammatory reaction. Twelve days after the sutures were removed and to date the conjunctival flap seems to be serving the purpose. The hernia was about four millimeters in diameter.

DISCUSSION

Dr. Michael Goldenburg said he would like to hear the members discuss what should be done for coloboma. Should an attempt be made to close it up or permit it to remain? The probabilities were that if nothing was done to close it up the

opening would result in closure as the child grew up. He suggested that the transplantation of fascia might close it up permanently, although he had never tried it. It appeared to him as a possibility.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Monday evening, December 1, 1919, at the Palmer House.

The President, Dr. Elmer L. Kenyon, in the Chair.

Dr. George W. Boot presented a patient with a bone transplant in the nose, (2) a patient who had suffered with cerebral hemorrhage, and (3) a case of brain abscess.

ABSTRACT

Case 3. The patient was a woman, aged 35, married and the mother of two children. She complained of dizziness and of pains in the left ear.

The left ear began to discharge with an attack of scarlet fever at the age of 12. The discharge ceased after a time, but began again at the age of 29 and has persisted ever since. She was referred to Dr. Boot to have a radical mastoid operation to put an end to the discharge and to the dangers of a chronic suppurative otitis media.

Accordingly, a radical mastoid operation was done. During the operation the dura over the tegmen antri was exposed but was not injured in any way. The antrum was very small and the mastoid was eburnated from the long continued discharge.

She did very well after the operation until the eighth day, when she complained of a bad headache, for which she was given phenacetin in five grain doses.

On the ninth day she appeared somewhat stupid in her actions and would not protrude her tongue when told to. She did not complain of headache and no disturbance of speech was noted other than that what seemed attributable to her rather stupid condition. She appeared obstinate rather than aphasic. Her temperature at this time was 98.6° and her pulse 60.

On the tenth day her morning temperature was 98.6° F. and her pulse 60. She was decidedly stuporous. She would not protrude the tongue and when she talked she acted decidedly sleepy. The nurse reported her talk as irrational at times. There was no rigidity of the neck and Kernig was absent. There was no vomiting. Lumbar puncture gave a clear fluid with no appreciable increase in pressure. There were 132 cells to the cubic millimeter of the spinal fluid. The pupils were equal and reacted to light. The eye-grounds were negative except for a slight fullness of the veins. There was no choked disc.

On the eleventh day she was still more stuporous. Babinski and Gordon reflexes were found positive and all the deep reflexes were somewhat increased. At this time it was found that light thrown into the right eye from the right gave no contraction of the pupil, while light thrown into the right eye from the left caused contraction. The left eye was not re-

sponsive on account of a mydriatic having been used the preceding day. It was difficult to get her to reply to questions. There was no nystagmus.

A diagnosis of abscess of the left temporosphenoidal lobe was made. Operation was done a few hours later. The mastoid wound was reopened and the tegmen removed over an area 1.5 to 2 cm. in diameter. The granulating dura was incised and the searcher passed upwards about 1.5 cm. when there was a gush of thin brownish pus about 15 to 20 c. c. in amount. This was accompanied by considerable bubbling and a foul odor as if from a colon bacillus infection.

A split rubber tube was introduced to the depth of the abscess cavity and dressings applied. The following morning she was quiet and apparently better, but did not speak. During the afternoon she awoke from sleep and spoke quite rationally and from this time on she improved steadily until she is as you see her now, completely recovered with the ear quite dry.

The symptom to which he called especial attention was the loss of reflex contraction of the pupil when the light was thrown on the half of the retina supplied by the left cerebral hemisphere.

Discussion

Dr. Stein asked whether Dr. Boot had any special object in transplanting the pieces of tibia in the nose case in two stages, or whether it was an after-thought, and also why he used tibial bone in place of rib. He thought there was a depression just above the tip of the nose.

Dr. Boot said that it was an after-thought, but he believed it was better to do it in two stages than to have to remove some of the bone. He expected to put in a wedge-shaped piece later to remedy the depression referred to.

Dr. Long said he had done some similar work. In one case he dissected around the nares, dissecting the skin up to the bridge of the nose, and took a strip of the eighth rib, containing bone and cartilage and inserted it beneath the skin along the top of the nose. This procedure obviated a scar over the bridge and gave a large high nose, which was the object of the operation. A small portion of the bony rib was cancellous and some days later the skin over this spot became red, and a small area of fluctuation appeared; an incision was made and a few drops of pus were removed. Daily dressings for ten days resulted in a complete closure of the wound, and the patient was discharged with a perfectly normal nose, as I hope to show you at some future time.

Dr. Boot said one reason that he did not take a piece of a rib for his work was because in a similar case another laryngologist took a piece of a rib and an empyema developed which required a couple of operations by a general surgeon.

Dr. Edwin McGinnis presented a soldier who had been shot through the neck at the battle of the Argonne. The following day a tracheotomy was performed; five weeks afterward the tube was removed and for ten days the patient apparently did well. He then became short of breath, the tracheotomy was repeated and the tube reinserted. Following this he wore the tube for a year. The bullet had passed through the ventricle and there was a band of adhesions from one side to the other with a very small opening. He could breathe fairly well through the larynx with a cork in the tracheotomy tube, but did not get enough air to enable him to run or go upstairs. In February, 1919, the scar tissue was incised and bougies were passed. In October he made an effort by the indirect method to cut out the scar, but this was unsuccessful so the suspension operation

was resorted to on the 16th of November and the scar was dissected out with both hands, using grasping forceps and a long scalpel, leaving a clean looking larynx. At the time of presentation the tube had been removed for a week and the larynx looked almost normal. No intubation tube had been used after the operation; there was no edema and very little swelling followed the operation.

Dr. L. W. Dean, and Dr. M. Armstrong, Iowa City, Iowa, presented a paper entitled "The Occasional Necessity of Doing Radical Operations on the Paranasal Sinuses in Children, with Illustrated Cases."

ABSTRACT

Dr. Dean stated that with rather considerable experience in treating paranasal sinus disease in infants and young children, they had found it only very rarely necessary to perform extensive operations upon the paranasal sinuses. Approximately 80 per cent of their cases have been apparently cured by the removal of adenoids and diseased tonsils, but in no instance where the hemolytic streptococcus was the bacteriological factor has healing resulted from that procedure. In those cases where the removal of tonsils and adenoids has not produced a cure, rather mild treatment, with or without drainage and ventilation of the sinuses, has usually given satisfactory results.

Early in 1919 the authors expressed the opinion that with children they would never do an operation on the maxillary antrum through the incisor fossa. Since then they have operated upon two cases by this route, being firmly convinced that the exigencies of the situations and the results justified the procedure. They had to deal with children with infectious arthritis, involving practically every joint in

the body, including the temporomandibular. This condition had progressed in spite of all treatment, and they knew the ultimate outcome of the condition, unless checked, would be ankylosis of the joints with utter helplessness and death. After proving conclusively that there was present in the paranasal sinus a virulent organism which, when injected into an animal produced arthritis, and when prolonged treatment did not eradicate this organism, after a most careful study of the case they proceeded with extensive operations, making every effort to preserve essential structures. Where the Denker operation on the Highmorian antrum was performed, all the teeth remained vital. The principal result of the operations has been the apparent healing of the sinus disease; the structures have no longer served as foci of infection. The joints have become quiescent; the pain has disappeared; the temperature curve has returned to normal and the appearance of the patient has improved.

Two case histories were presented in detail. Each of these cases had a negative Von Pirquet reaction, and material from the sinuses in each case, when injected into guinea pigs, produced no tubercular lesions. The following conclusions were given:

1. Every case of arthritis in children that does not do well after the tonsils and adenoids are removed

should have the paranasal sinuses examined, even if a previous examination has been negative.

II. If, after non-operative or operative treatment of the paranasal sinuses a focus of infection apparently persists in the sinuses, virulent pyogenic organisms should be sought in the sinuses, and if found more drastic treatment should be substituted.

III. If, after careful, prolonged study, it is evident that only extensive operations will remove the focus of infection, then and then only should they be performed.

DISCUSSION

Dr. Sonnenschein said that while it was true that in a majority of infants only the antra and ethmoids were developed to any extent, it had been shown by a number of men that it was possible to have very large sinuses in early childhood. The frequency of the inflammations and the hearing they had upon arthritic changes, he thought could not be better emphasized than by the work Dr. Dean had done. He had seen the two cases reported and testified as to the thoroughness and conservatism with which they were handled by Dr. Dean.

Dr. Beck stated that Dr. Oppenheimer, of New York, several years ago, presented an article on sinusitis in children which had been overlooked by the vast majority of ophthalmologists, who considered it a useless proposition to try to do anything with the sinuses in children, and not until Dr. Dean and Dr. Oppenheimer presented their papers, with extensive laboratory work, did the men begin to take it up. Dr. Coffin, of New York, had also reported successful work in diseased sinuses in children. Dr. Dean had shown that the current belief regarding the sinuses was anatomically wrong. The speaker had had no experience in operating in arthritis in children, but had done a good deal of work on non-suppurating cases and had found a good many of them infected.

Dr. Norcross asked Dr. Dean to tell something of the less radical treatment in childhood; whether in a young child the ordinary procedure of puncture was done without an anesthetic, or if the children were put to sleep.

Dr. Robertson thought the pediatricians and general practitioners had received the impression that rheumatism, if not a gastrointestinal affair, must be tonsillar or dental, and this paper was very appropriate. The sinuses vary in different individuals as to their appearance; some come very late, whereas others are developed at a much earlier age. He believed the size of the sinus was represented by the growth of the face, and before the face was formed no one could expect to find much of a sinus.

Dr. Pollock cited a case of definite antrum trouble in a child of eight. He had irrigated the antrum with a small trochar, repeating the procedure every second day for seven or eight treatments, until the discharge ceased. The pus showed staphylococcus. Since then the patient had remained well and he had found no one who had ever irrigated an antrum in a patient younger than eight years.

Dr. MacLay emphasized the fact that the cases must be watched carefully, and for some time, before surgical interference is attempted. Treatment, carefully carried out, should be used before operation.

Dr. Dean (closing), felt that everyone was opposed to extensive operations upon the nasal sinuses, even in the adult, and it was doubly important to avoid radical operations in children. He did not feel ready to answer the question in regard to methods of treatment definitely at this time. He called attention to the great care necessary in puncturing or washing out the Highmorian antra in infants. In these cases he used chloroform anesthesia and did not consider it safe to puncture the Highmorian antra in infants without having the X-ray plates of the sinuses before him. In puncturing he used the needle with a caliber of 1½ mm. Before introducing it, the inferior meatus was cleansed with 95 per cent alcohol, the needle was then passed into the antrum underneath the inferior turbinate. A second fine needle was then introduced into the antrum through the first. Attached to the second needle was a syringe containing about a dram of sterile water, which

was injected into the antrum, washed around and then aspirated. In this way material for culture was secured. If methylene was applied about the ostium of the sinus before investigating it the methylene blue did not make its appearance in the washing. Again the normal antra have been found sterile. These two things indicated that the technic was exact. After securing the solution a silver preparation was usually injected into the antrum.

Dr. David J. Davis presented a paper on "Some Observations on the Bacteriology of the Palatine Tonsils."

Attention was called to the necessity of studying intensively a suspected focus of infection like the tonsil in both normal and infected persons. Lymphoid structures attain their maxima in the throat and in the region of the ileocecal valve and appendix, and these maxima correspond in general to the normal distribution of bacteria in the alimentary canal. At these points, also, the greatest number of pathogenic microorganisms attack the body. Certain organisms injected into the crypts of the tonsils disappear in a few days. The flora normally found in the tonsils is a restricted one. Actinomyces-like granules composed of fusiform bacilli, streptococci and spirochetes growing together, appear as more or less normal inhabitants of the crypts.

In 1912, in studying the bacteriology of the tonsils from various diseases, including arthritis, nephritis and myocarditis, the writer was struck with the common occurrence of typical hemolytic streptococci in the crypts, often in pure culture, whereas on the surface of the same tonsils they were often few or absent, while the green-producing cocci predominated. In forty-eight cases of the foregoing diseases the hemolytic streptococcus was predominant or abundant in forty-five, or 94 per cent. In a series of sixty-one pairs of tonsils, which were extirpated mostly from children, chiefly because of hypertrophy, many appeared quite normal, and hemolytic streptococci were found practically as often; namely, in fifty-five, or 90 per cent. Pilot and Davis have again recently investigated this matter and compared the tonsillar crypt flora with throat swab and tonsil surface cultures. In one hundred cases of ordinary hypertrophy without inflammation, the pharynx was positive for hemolytic streptococci in 43 per cent and the tonsil surface in 61 per cent, and in these the hemolytic colonies numbered less than 10 per cent of the total number of colonies. In the crypts of the same tonsils after extirpation the hemolytic streptococci were found in 97 per cent, and in most were greatly predominant. They found that in twenty-four normal persons, cultures from the surface of tonsils revealed hemolytic streptococci in 58 per cent, usually not predominant. In nineteen persons without tonsils, cultures from the pharynx and tonsillar region yielded hemolytic streptococci in only three, or 15 per cent. This was quite in accord with the work of Nichols and Bryan in the United States army. The hemolytic streptococci found in the throats of apparently normal persons were distinctly pathogenic for rabbits.

Dr. Davis knew of no other anatomic structure in the body that so consistently harbored hemolytic streptococci as do the tonsillar crypts, and raised the

question as to the possibility of the tonsil crypts being the chief feeding focus of hemolytic streptococci for the throat and the respiratory passages. Perhaps they were as normal to the tonsil crypts as was streptococcus viridans to the buccal mucosa, staphylococcus albus to the skin, or the colon bacillus to the intestine, and from here they might be readily disseminated to adjacent tissues, ready possibly to take advantage of certain conditions, especially diseases of the respiratory tract, and give rise to secondary infections of a most serious nature.

The question arose as to whether or not persons were usually infected with their own hemolytic streptococci, or were the invading streptococci of foreign origin. No doubt the latter statement was often true, as seemed clearly proved in the case of sore throat epidemics of milk origin. Many facts also pointed to the common dissemination of streptococci by means of droplet infection. The route of infection was not so clear, however, in secondary streptococcus infections following other diseases. In the common terminal infections so often due to this organism there was little doubt that the individual was killed by his own streptococci. It seemed reasonable to suppose that individuals are infected from time to time with their own streptococci, especially following contagious diseases, and that by this process the streptococci become more and more virulent and aggressive, reaching a point ultimately at which the small doses contained in infected droplets in eating utensils or in other vehicles are sufficient to transmit the disease to a normal person. Thus a secondary invader might become transformed into a dangerous primary infective agent.

DISCUSSION.

Dr. Norcross said that a number of years ago the removal of the tonsils was advocated in every child who had reached the age of four years, the author of this paper stating that he had never seen a child have diphtheria who had had his tonsils removed. Dr. Norcross felt that most of the serious complications which follow infectious diseases in childhood were associated with streptococcal infection, and while the primary disease might be mild, the complications might be quite severe. There seemed to be a symbiosis between the streptococci and the invading organism. If practically all the tonsils contain hemolytic streptococci, there would be no reason for making a bacteriologic examination of the tonsils before removal. If the different strains of streptococci could be differentiated, so that one could identify the virulent from the non-virulent, then a bacteriologic examination of the tonsils would be helpful.

Dr. Hayden did not agree with Dr. Norcross in suggesting that further routine examinations of the tonsils were not necessary, but thought that in the light of Dr. Davis' scientific work the most careful and minute bacteriologic examination was still in order, to allow Dr. Davis to differentiate between these streptococci until the pathogenic ones could be recognized. Dr. Hayden cited the case of a doctor who sustained a wound of the right index finger while doing a tonsillectomy. About three weeks later his attention was called to the fact that the wound had not yet healed. Scrapings were made and very active spirochetes were found. They were not of syphilitic origin and evidence of any form of syphilis was entirely absent. Dr. Hayden had never heard of any syphilitic infection being sustained in this way.

Dr. Holinger expressed his surprise that Dr. Davis found virulent bacteria so deep in the crypts of the tonsils, and asked whether any experiments had ever been made to influence the flora of these deep parts of the mucous membrane of the

pharynx. He always had the impression that the flora of the pharynx was rather superficial, and in a case of acute inflammation in his own throat improvement was almost instantaneous when remedies were used which reached only the surface, while other applications which were intended to reach the depths had been inefficient for ten or twelve days.

Dr. Boot thought some of the speakers had the idea that the streptococcus was present in all tonsils and justified their removal, and asked whether the presence of the staphylococcus albus on the skin of all patients would justify removing the skin, and the presence of the colon bacillus in all colons would justify the removal of the colons.

Dr. Davis (closing) said that the differentiation of various strains of hemolytic throat streptococci had been, and then was, a burning question. So far, satisfactory results had not been obtained. From the normal throat and tonsils one recovered hemolytic streptococci quite like those from pathological tonsils and throats. Both might be equally virulent for various experimental animals. It would appear that the virulence of these cocci was a transient and variable characteristic at times. It would also appear that their aggressive powers might depend largely on certain delicate and fluctuating factors resident in the host.

As to the diminution of the streptococci in the mouth, he thought the simple method of keeping the mouth clean, particularly the teeth, would diminish their number. The crypts in the tonsils were difficult to clean, and it had been observed that individuals who were without tonsils were relatively free from hemolytic streptococcal infection of the throat, or if they acquired it they recovered more promptly.

Dr. Davis stated that he was not interested in this question of the standpoint of medicine, and the studies were not made from that viewpoint. He did not wish to be understood as advocating any such procedure as universal tonsillectomy, and did not feel competent to make any statement about it at present. The whole problem of tonsil infections was in a very unsatisfactory state, and he felt that bacteriological examination as at present made did not mean very much. If in the tonsils a definite abscess containing pus was found and there was an associated pathological condition suggesting a relationship, surgical procedure would be justified. One should always take into consideration the clinical, the bacteriological, and the pathological features in all cases when making a diagnosis and considering treatment, and should not rely on the bacteriological examination alone.

Dr. Lewy asked whether experiments had been made on animals to determine whether the bacteria found in the normal crypts of the tonsils of the animals were pathogenic to those animals.

Dr. Davis (replying) stated that Sherman had recently shown that hemolytic streptococci from dogs' tonsils were very similar to those found in a human being. They were virulent for rabbits, but he thought they had not been injected into dogs.

CHICAGO OPHTHALMOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Ophthalmological Society was held December 15, 1919, with the President, Dr. William L. Noble, in the Chair.

(A) CONTINUED LOSS OF VISION DESPITE RESTORATION OF NORMAL TENSION.

Dr. E. V. L. Brown reported the case of Mrs. McC., aged 75. The left eye was trephined 33 months ago. "Late infection" occurred 6 months later, but the eye healed with good central vision and a satisfactory form field, a tension of only 15. This status was maintained for 8 months more, when the vision suddenly dropped from $\frac{3}{10}$ to between $\frac{1}{10}$ and $\frac{2}{10}$ in the course of 4 weeks. The tension did not rise and the fields were little, if any, poorer. Four weeks later, however, they were found to have narrowed to

about $\frac{1}{6}$ of what they had been, although tension remained at 15. The patient was still able to get about by herself, though no longer able to read print, etc. This relatively favorable status continued for about 10 months, when within a period of 27 days the central vision dropped from between $\frac{3}{10}$ and $\frac{4}{10}$ to less than $\frac{1}{10}$, despite tension of only 9. In the last six months the patient had had to be led about and to all intents and purposes was blind from a glaucomatous process in which tension had not been found above 15 since she had a vision of $\frac{3}{10}$, 33 months ago.

(B) ATTEMPTED DOUBLE TREPHINING BY PURTSCHER'S METHOD. RIGHT AND LEFT PRIMARY (?) GLAUCOMA WITH ACUTE ATTACKS IN EACH EYE.

Right became blind from tension under myotic treatment with no relief from Purtscher's double trephining. Left iridectomy with normal vision and tension after fourteen years.

Mrs. R. B., aged 56, Jewess. The left eye suffered an acute attack of glaucoma with sudden temporal pain and vomiting 14 years ago. An iridectomy was done the next day and vision was restored to about what it had been before. L. V. is now 1.5 and Schiotz only 18, although the nasal fields are almost gone and temporal ones decreased to $\frac{1}{4}$ normal. R. V. failed suddenly in December, 1914, without pain. Widespread hemorrhagic retinitis was found when first seen by the writer 5 weeks later, but there was unmistakable evidence of previous long-continued pressure; viz., a very shallow anterior chamber, pupil dilated, oval and fixed, atrophic iris, 3 D cupping of the disc extending to the scleral ring from 7 to 12 o'clock, with undermining at 12 o'clock; R. V. $\frac{2}{200}$, form field concentrically reduced to about $\frac{1}{10}$; tension had risen to 33 (L 18), the disc was cupped 5 C. in the temporal half but none in the nasal half; 14 days later the nasal half was found cupped 2 D under a tension of 31. (L 16); R. V. = $\frac{3}{10}$. Operation advised but refused. Miotics were continued and this normal central vision held for 28 months longer. The patient then absented herself from the clinic for 16 months, returning with a Schiotz of 60, (L 18), "completely and totally" cupped R disc; R. V. = perception of light only. Almost no anterior chamber remained. The possibility of an acute attack in this eye was explained to the patient and she consented to a decompression operation. Purtscher's double trephining, recently described in the K. M. F. A. 63, Bd. 2, p. 241, 1919, was undertaken in the hope of securing a flat, nonvesicular covering for the wound tract. A large, conjunctival flap was made, the cornea grooved some 2-3 mm. above, and a 3 mm. von Hippel trephine put in position with the intention of cutting through merely the outer half of the sclera and only that part lying under the upper circumference of the cutting edge of the trephine. To do this one pressed against the sclera with the part of the cutting edge lying away from the lumbus. A disc of outer layers of sclera was then dissected away from the inner half of the sclera but was left attached on the side

nearest the cornea, and this attachment acted as a hinge for the scleral flap. It was then held aside and a 1.5 mm. hole trephined through the remaining inner layers of the sclero-corneal tunic with an ordinary instrument. An iridectomy was then done and the hinged outer half disc of sclera allowed to go back with the inner trephine opening, the conjunctiva replaced, etc. In this case the sclera was so thin that with the first revolutions of the von Hippel instrument the cutting edge went through the entire thickness of the sclera, except the lower circumference; this was not cut and served as a perfect hinge. The ciliary body and some iris presented and was excised. A small amount of vitreous followed. The conjunctival flap was replaced. Healing had been uneventful, but the eye was still red and had a high tension. Purtscher spoke of having performed the operation in only a few cases. Meller was well enough impressed with Purtscher's presentation to say it should be given a thorough trial. He had given up Elliot's operation, except in older people, because vesicular scars resulted and so frequently were eroded by lid action and led to late infection. The writer had also seen four late infections and had done as few trephinnings as possible since 1914. He therefore welcomed the Purtscher modification, but felt many sclerae would be found too thin to go half way through and no further with a von Hippel instrument. He would try a hand threphine in another attempt.

OBSERVATIONS OF 100 CASES OF PRIMARY (ACUTE, CONGESTIVE AND SUBACUTE) GLAUCOMA UNDER TREATMENT AT THE ROYAL LONDON OPHTHALMIC (MOORFIELDS) HOSPITAL DURING THE PAST FOUR YEARS, WITH A COMPARISON OF VISUAL RESULTS.

DR. CHARLES MAGHY, late pathologist to Royal London Ophthalmic (Moorfields) Hospital, stated that the classification followed in this series of cases was the one suggested by Colonel Elliott. Many of the acute cases, however, showed a condition of chronic glaucoma existed in the other eye at some period. No attempt was made to divide the cases into the various stages. Aside from operation, the treatment was the same for each case, with the exception that most of the severe cases had leeches applied. Oily eserin, 1 per cent., was used two or three times a day during the first 24 hours, followed by the aqueous solution, $\frac{1}{2}$ per cent., three times a day. Aspirin was occasionally given in large doses. Morphin was seldom resorted to for the pain. The operated cases received calomel and salts, except those taken direct to the operating room from the out-patient department. In all the trephined cases the Lang $1\frac{1}{2}$ mm. instrument was used, after being tested with fine kid and examined with a binocular loupe. Most cases had one fine black silk stitch in the conjunctival flap. A few cases had a Herbert's sclerotomy, but nearly all the acute cases had an iridectomy, the iris being torn out after being severed at one edge. A narrow Graefe knife was used to make the section.

Following the operation, atrophin sulph., $\frac{1}{4}$ per cent., was instilled in the operated eye by some surgeons; in other cases it was not used until the second day. Only the operated eye was bandaged. The tension was seldom recorded with a Schiotz or McLean tonometer prior to operation. Fields were taken in all the cases where the vision would permit, except in a few cases, prior to operation, or later, in the out-patient department. Many of the cases did not attend the hospital for many months after being discharged, so it was impossible to keep a record of their progress.

In the 87 patients admitted there were 103 eyes with acute or subacute glaucoma. The cases with chronic glaucoma in the other eye were merely mentioned with a note of the vision and condition of the optic disc. The right eye was involved in 48 and the left in 55 cases. There were 24 males and 63 females. As to age, one case was 25, 2 were 31, 20 were between 40 and 50, 21 between 50 and 60, 37 between 60 and 70, 14 between 70 and 80, and one between 80 and 90 years.

Influenza was present or preceded the attack in 4 cases, rheumatism in 4, and 3 cases had pyorrhea very badly. In 2 cases there was a history of injury before the attack set in, and 5 cases showed a post-operative injury. A hyphema developed in 8 cases. In only 1 case was the iris pillar prolapsed and it remained in place after the use of an iris repositor.

The cases admitted without treatment numbered 61. Boric lotion was used by 13, atropin by 4, and eserin by 8 of the cases. Previous attacks were noted in 74 cases, while 26 came to the hospital during or just after the first attack; 65 patients saw rainbows, and 46 vomited with their attacks. A few patients were nauseated but did not vomit.

Acute congestive glaucoma was present in 69 cases and subacute in the balance. Of the 63 iridectomies, the iris pillars were drawn up to the wound in 4, not including the one that prolapsed, mentioned above. In the 35 trephined cases, the disc fell into the anterior chamber in one without causing symptoms of irido-cyclitis. A Herbert's sclerotomy was performed in 1 case and 1 case was eviscerated following infection; 3 cases were unoperated and 1 refused operation.

The fundus was observed by lens' opacities in 7 and by vitreous opacities in 11 cases. In many of the latter cases, however, the fundus was seen at a later date. In 1 case the eye converged 20 degrees. In 2 cases the choroid was detached, but only for a few days. Rational detachment occurred in two cases and persisted. Rational hemorrhages were present in at least 3 of the cases, and in each case near the optic disc. In 16 cases the optic disc was cupped. No cupping was seen in 75, while in the remaining cases the fundus was obscured. Vitreous opacities were present in 33 cases, although in many the opacities were very fine and disappeared later. The nasal field in 11 was contracted from 5 to 30 degrees. Two cases showed a concentric contraction, one of 10 and the other of 20 degrees. In 4 cases no

contraction was present, while in the remaining cases no field could be obtained, owing to the great reduction in vision at the time of entrance to the hospital. The lowest tension prior to operation, recorded with a Schiotz tonometer, registered 255 mm. Hg., and the highest 42. In 9 of the cases the fellow eye had been operated upon for chronic glaucoma and in 3 for acute glaucoma at some previous period.

In a review of the literature of the past ten years, covering the period since the modern decompression operations were introduced by LaGrange and Elliott, the speaker had considered only those authors who had reported 10 or more cases. While many oculists had had this number or more, they had not given the details of their cases so that a comparison could be made, and one had to confine comparisons with the cases reported by Stock and Meller. In a recent letter from Col. Elliott he was unable to furnish his statistics for comparison with the above authors and those of the Moorfields hospital staff. The following table gives a comparison of Stock, Meller and the author, showing the visions on discharge, and the cases that improved, remained stationary or became worse. The cases included under the title "author" were operated upon by the following men: Treacher Collins, Holmes Spicer, J. B. Lawford, J. Herbert Fisher, J. Herbert Parsons, Percy Fleming, Claude Worth, A. C. Hudson, Foster Moore and Malcolm Hepburn.

(To be continued.)

MADISON COUNTY OUR JULY MEETING

The Madison County Medical Society met at the Alton State Hospital on July 2, 1920, with Dr. F. O. Johnson, president, in the chair.

Twenty-two members and about fifty visitors were present.

The secretary announced the receipt of \$512.66 from Madison County and \$10.00 from the Knights of Pythias of Wood River, to be added to the treasury of the tuberculosis fund.

The monthly report of the community nurse was read and ordered filed. The resolution on the reconstruction of the Liberty Bell, offered by Dr. H. C. H. Schroeder, was endorsed.

Mr. J. W. Becker of Jerseyville, State Director of School Activities, presented the cause of the Modern Health Crusade. After some discussion a committee consisting of Drs. Hastings, Kiser and Luster was appointed to secure a county director and to make such other arrangements as may be necessary.

The furling of our service flag was the next order of business and Mr. Thos. W. Williamson of Edwardsville delivered the oration. It was a most interesting and eloquent address and was highly appreciated by his large audience. A vote of thanks was tendered the speaker for his magnificent tribute.

Dr. and Mrs. Geo. A. Zeller of the Alton State Hospital invited all present to partake of some elegant refreshments.

OUR LIBERTY BELL

(Dr. Hugo C. H. Schroeder, Granite City, Ill.)

Preserved to us in Independence Hall, Philadelphia, bearing the prophetic inscription, "Proclaim liberty throughout all the land unto all the inhabitants thereof," is a relic sacred to every American—THE LIBERTY BELL. On the adoption of the Declaration of Independence in 1776 the prophecy came true and its voice proclaimed to all the world the birth of a new nation founded on Liberty.

In the heart and mind of every American it stands as the visible symbol of liberty. It had proclaimed liberty throughout all the land, but millions of the inhabitants thereof still remained in slavery. When the first rumblings of the coming storm were heard, less than two short years before Lovejoy's life was made a sacrifice, its voice was stilled. As its tolling announced to the people on July 8, 1835, that all that was mortal of Chief Justice Marshall was being carried through the streets of Philadelphia to its last resting place a fissure appeared. During the 85 years it has been mute the proclaimed liberty has been made an achieved fact.

Now at a time when the world is suffering the throes of rebirth comes the proposal to heal the wound in the bell and to give it a bath of regeneration to arrest the disintegrating forces which have been slowly but surely working its destruction, to the end that its voice may again be heard in the land. Coming as it does at the close of the most colossal struggle in history when millions of men died that LIBERTY might endure; when all true Americans are re-dedicating themselves to the preservation and perpetuation of the freedom achieved by our fathers, what could be more fitting than the restoration of our Liberty Bell. Let the regeneration of the Bell symbolize the rebirth of the Nation.

Therefore I propose the following resolutions:

WHEREAS, In the heart and mind of every American the Liberty Bell is the symbol of Freedom;

WHEREAS, Through these 85 years while its voice has been hushed, freedom has come to millions;

WHEREAS, We, as a nation are just emerging from a victorious struggle for the perpetuation of democracy and freedom;

WHEREAS, It is proposed to restore to life and usefulness our Liberty Bell through the process of electric welding and electrical baths; be it

Resolved, That the restoration be accomplished; that the voice of the Liberty Bell again be heard in the land; that the regeneration of the Liberty Bell symbolize to us the rebirth of the nation; that we, the Madison County Medical Society of the State of Illinois, lend our every effort to the accomplishment of restoration of the Liberty Bell; and be it further

Resolved, That a copy of these resolutions be sent to the City of Philadelphia.

Philadelphia, Pa., July 7th, 1920.

Dr. E. W. Fiegenbaum, Secretary:

Dear Doctor—Your letter of July 3d, addressed to the Mayor and members of the City Council, submit-

ting resolutions adopted by the Madison County Medical Society, concerning the suggested restoration of the Liberty Bell, has been received and will have careful consideration.

DURELL SHUSTER,
Secretary to the Mayor.

PIKE COUNTY

The Pike County Medical Society met in Pleasant Hill, July 29, with all officers and 22 members present, a good attendance for summer. After a fine chicken dinner, which the South Pike men always provide for their guests, the program was given in the basement of the Baptist Church. Dr. H. P. Beirne, councilor of the Sixth District, presented an able and comprehensive paper on "Radium." This paper elicited much favorable comment and was discussed by Dr. Brenner of Quincy and a number of others. Dr. Padberg, a dentist of Quincy, read a paper on "The X-Ray in Dentistry," showing what a wonderful aid it is in the diagnosis of obscure conditions in the teeth and gums. An animated discussion followed.

Adjourned to meet at Barry for next session.

W. E. Shastid, Secretary.

Personals

Dr. Elinor Beatty is said to have returned to Pana to practice after some years in California.

Dr. O. J. Culbertson, of East St. Louis, was severely burned from the explosion of a can of gasoline ignited by a short circuit, while he was repairing his automobile.

Dr. I. S. Trostler, who for twelve years has been roentgenologist at St. Joseph's Hospital, Chicago, has removed to 812 Marshall Field Annex.

Joseph B. Liston, Carlinville, has been reappointed health officer for Macoupin county.

Dr. Walter H. Watterson, Chicago, has been appointed inspector of public tuberculosis sanatoriums throughout the state.

Dr. Dunning Steele Wilson, director of the Medical Department of French Lick Springs Hotel, French Lick, Indiana, brings to this position a medical and military experience that should raise the present high standard of the medical department at this famous American watering place.

News Notes

Dr. Charles Louis Mix has been appointed professor and head of the department of medicine, and Drs. Milton Mandel and John M. Lilly, clinical professors of medicine in Loyola University School of Medicine. Dr. Edward L. Moorhead has been appointed professor and head of the de-

partment of surgery; Dr. William E. Morgan, professor of surgery and clinical surgery; Drs. John F. Golden and Charles F. Sawyer clinical professors of surgery; Drs. Michael F. McGuire, George W. Hochrein and Frank E. Pierce, assistant professors of surgery; Dr. Philip H. Kreuscher, clinical professor of orthopedic surgery; Dr. George T. Jordan, associate professor of diseases of the ear, nose and throat, and Dr. Walter McGuire, assistant professor of obstetrics.

—The committee on medical education and hospitals of the Illinois Medical Society and representatives of the Illinois Hospital Association and of medical colleges, met at the Sherman Hotel, Chicago, on Friday, August 13, to discuss the eligibility of hospitals for the training of interns. It was determined that hospitals should have at least twenty-five beds; organized staffs; complete histories and records; laboratories for routine clinical, microscopic, pathologic and bacteriologic work; complete roentgen-ray departments; expert instruction in anesthesia; instruction in obstetrics; and definite rules in regard to the duties and privileges of interns.

—Dr. Karl F. M. Sandberg, one of the organizers of the Communist Labor Party and a delegate to the national convention, is said to have been sentenced July 30, to imprisonment for one year in the county jail.

—An outbreak of typhoid fever is reported in Pinckneyville, Perry county, where seventeen cases have occurred, and a second outbreak at Carmi, Pike county, where twenty cases of the disease have appeared.

—Dr. Oscar J. Brown, DeKalb, is reported to have been found guilty with other members of the Communist Labor Party July 30, and sentenced to imprisonment for one year in the county jail.

—An epidemic of paratyphoid fever is reported at Fountain Green, Hancock county, where more than 100 persons are reported to be ill. The cause of the disease is said to be chocolate ice cream which was served at a church social.

—A field day is to be given to all members of the Chicago Medical Society and their families by the North Side Branch of the society on the grounds of the St. Mary's Training School, near Desplaines, Wednesday, September 15.

—An association of colored physicians of Chi-

ago, of which Dr. Benjamin R. Bluit is president and Dr. Fred C. Cade, secretary, has purchased the Fort Dearborn Hospital and Training School for Nurses at 3831-3835 Vernon avenue.

—The roentgenologists of Chicago met August 5 at the Hamilton Club and organized the Chicago Radiological Association, electing the following officers: President, Dr. Alonzo C. Tenney; vice-president, Mr. A. M. Olson and Mr. J. H. Brothers; secretary, Mr. J. W. Ross, and treasurer, Dr. John H. Carpenter.

—The secretary of state has granted charters to St. Elizabeth's Hospital, Belleville; St. Francis' Hospital, Litchfield; St. Clara's Hospital, Lincoln; St. Joseph's Hospital, Highland, and St. Anthony's Hospital, Highland. These hospitals are conducted by the Sisters of St. Francis and are affiliated with St. John's Hospital, Springfield, and a number of others in Illinois and adjoining states.

—Urbana has abandoned its hospital project and by a vote of the board of directors will join hands with the board of directors of the Julia F. Burnham Hospital, Champaign, in making a success of the forthcoming drive for \$175,000 to remodel the present building and erect the first unit of a new hospital.

—The midsummer meeting and outing of Jo Daviess County Medical Society was held at Camp 19, near Gordon's Ferry, July 29. The address was delivered by Dr. George B. Eusterman of the Mayo Clinic, Rochester, Minn., who spoke on "The Medical and Surgical Aspects of Chronic Peptic Ulcers."

—An organization called the "American Protective Medical Fraternity" recently circularized Chicago physicians with applications for membership bearing the following statement: "I hereby agree to support the Constitution of the United States, particularly the 18th Amendment, and will assist the prohibition director through this fraternity in carrying out the terms and conditions of the Volstead Act as interpreted by this Fraternity."

A circular accompanying the application blank states: "The Volstead act does not limit the doctor, but makes him the judge of each case. Federal Judge A. M. T. Cochran of the United States District Court at Lexington, Ky., has decided the prohibition director has no authority to limit the number of prescription blanks to be fur-

nished physicians, and has issued an injunction against the prohibition director at Louisville, Ky., to this effect. This fraternity is proceeding to secure an injunction in this district and need your support."

—The Chicago Policlinic is said to be preparing to start a drive for funds to finance a new building at LaSalle and Oak streets, which would provide increased facilities for the Policlinic and additional room for the Henrotin Memorial Hospital, with which the Policlinic is affiliated.

"Dr." Orlando E. Miller, whose activities as the most versatile quack in the country have been often exposed by Journal of the American Medical Association, now has Chicago covered with posters advertising the "International Society of Applied Psychology," of which he is president.

—The John Crerar Library has opened a temporary reading room on the third floor of its new building at 158 North Michigan avenue; hours from 9 a. m. to 5:30 p. m. For the present only the current periodicals and some reference works are available. The general collection of books will be installed as rapidly as possible, but will not be available until the building is further advanced.

Deaths

JAMES S. BELL Oak Park, Ill.; Homeopathic Medical College of the State of New York, New York City, 1866; aged 79; died, August 8, from senile debility.

WILLIAM H. CROWLEY, Chicago; Rush Medical College, 1896; aged 53; died at his old home, Potsdam, N. Y., July 26.

OLGA DAVIS, Chicago, College of Physicians and Surgeons, Chicago, 1909; aged 45; a specialist in diseases of children, and for many years a member of the staff of the Emanuel Mandel Memorial Dispensary of Michael Reese Hospital; died at Mackinac Island, Mich., August 9, from heart disease, a month after an operation for disease of the gallbladder.

TRUMAN P. FRENCH, Chicago; Indiana Medical College, Indianapolis, 1878; aged 69; a member of the Illinois State Medical Society; for many years a practitioner of Vermillion County, Ill.; died at the home of his son in Springfield, July 13.

ISADORE MAYOR JOSEPH KANE, Chicago; Loyola University, Chicago, 1920; aged 29; died in Mercy Hospital, Chicago, August 1, from general peritonitis.

ARTHUR BIRCH LOCKRIDGE, Danville, Ill.; Indiana Medical College, Indianapolis, 1906; aged 41; died at the home of his parents in Greencastle, Ind., August 1.

GEORGE PHILLIP RODEMICH, Millstadt, Ill.; Barnes Medical College, St. Louis, 1908; aged 47; died June 12 from nephritis.

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FIFTY PER CENT. OF SICKNESS CAN- NOT BE PREVENTED.

I FIND MUCH DATA BOTH BIOLOGICAL AND
MEDICAL WHICH IS DIRECTLY OPPOSED
TO ANY SUCH CLAIM. SEARCH
AS I MAY I HAVE NEVER BEEN
ABLE TO FIND ANY DATA
WHICH SUPPORTS SUCH
PROPAGANDA*

DISCUSSION ON NEW YORK HEALTH CENTER BILL

E. MACD. STANTON, M. D., F. A. C. S.,
Chairman, Committee on Public Information, Schenectady
County Medical Society,

SCHENECTADY, NEW YORK.

Least of all do I admire those who are given too much to criticism. I will ask your pardon therefore, if in the few minutes at my disposal I appear to be mostly critical. I realize the great work being done by our State Department of Health and by the Health Officers of this State. If the time were at my disposal I could praise as well as criticize.

I am not by experience or special training qualified to express an opinion concerning many features of the proposed plan for state subsidized health centers. I have, however, had a number of contacts with the propaganda being distributed by those in favor of the plan. I believe that all of you will agree with me that real progress must be based upon real truth. True progress never comes from marshalling together a mass of false statements, or half truths, or even little truths in improper or false perspectives.

During the past two years it has fallen to my lot to spend considerable time in studying the relationships of the medical profession to the public in general. As a result of these studies I have come absolutely to the opinion that the medical profession has nothing to fear from the

real truth concerning any problem relating to the practice of medicine. Also let me say that I believe that much of the difficult situation now confronting the profession is the direct result of misleading statements and propaganda fed to the public from medical and semi-medical sources. I regret to say that in my opinion some of these misleading statements have come from our own State Department of Health and from others actively engaged in public health work.

By way of preliminary illustration let me mention just one type of statement and how it reacts against the medical profession. For a number of years I had read here and there statements to the effect that with the present development of medical knowledge about one half of sickness as it occurs in average communities is really preventable. Such statements seemed harmless enough and I attributed them to the over-enthusiasm of some public health workers more interested in imparting their enthusiasm to others than they were in the fundamental biological factors controlling the situation. However, when I came to study the problem of Compulsory Health Insurance this apparently innocent statement took on an entirely new significance. I was surprised to find that in the opinion of the public about four-fifths of the argument for so-called health insurance centers around the belief that according to the present development of medical science about one half of disease could be readily prevented. The public argues thus. We are told by medical authorities—even by men representing the State Department of Health that something like one-half of sickness as it now occurs is preventable. It is not prevented. Therefore, there is something radically wrong with medicine as it is now practiced. Mr. Andress, Mr. Lapp and others tell us that Compulsory Health Insurance will produce the desired results, therefore, let us have health insurance. Time and time again, no matter

*Read before State Sanitary Officers' Convention, Saratoga, New York, September 8, 1920.

where the argument starts, this is the final picture that appeals to the lay public. As a matter of fact the very name health insurance is based on this misconception and in order to incorporate the alleged preventive medicine possibilities into the scheme it is practically stripped of all semblance of a real insurance proposition.

Do the individual members of this audience really believe that with the human animal as he is now constituted and by the use of really practical means it would be possible to prevent anything like one-half of the sickness which actually occurs each year in your own communities? Search as I may I have never been able to find any data which would support such a claim. I can find much data both biological and medical which is directly opposed to any such claim. I believe that it is the duty of our State Department of Health to furnish us with a true picture as to just what are the proven possibilities of practical preventive medicine as they may relate to the average morbidity to be expected in New York State. It is the duty of the health officers of this State to demand that the department furnish them with such a picture because nothing can be more unjust to the medical profession than to infer that certain results could or should be accomplished when the cold hard facts do not support the assumption that these results could be accomplished even under ideal conditions. I regret to say that my very first contact with the propaganda for the Health Center project was to hear a representative of our State Department of Health quote the statement of a lay commission to the effect that a properly organized medical service could reduce sickness by one-half.

Now let us turn again to the Health Center propaganda. A member of the State Department tells us that "Experience has further shown that the best results in diagnosis and treatment can only be obtained by the coordinated efforts of a group of specialists working together." No one will accuse me of underestimating the value of group medicine. I have been in it all my life, but the propaganda for the so-called Health Centers does not put group medicine in its proper perspective. In the great majority of cases the real diagnosis must still depend upon the careful history and physical examination of one responsible physi-

cian. The family physician is and always must be the real backbone of medicine and I cannot see how either he or the public is really going to be benefited by propaganda which infers that he is not capable of doing his work properly.

In a definitely inspired communication, appearing recently in the *New York Times*, we are told of the State Department's group diagnostic clinics and that "At the present time a rural physician who has a difficult or obscure case must send his patient to a large city to consult specialist after specialist, and at a great expense, before a diagnosis can be made." Was this statement the strict truth stated in its proper perspective? In Schenectady County, and similar conditions obtained in most other counties, we have an abundance of specialists and I believe that they are as well trained and use as good judgment in their work as do the specialists anywhere. It is inferred that the average man cannot afford to consult these specialists. As far as I can ascertain any person in Schenectady County can have all ordinarily necessary examinations made for a total cost of about two pairs of shoes. In most cases it need be less than this. The exceptional case is like the swallow which does not make the summer. To describe the very exceptional case and exceptional specialist as representing the true condition of affairs is not fair to the great group of men who have given special time and special study to their work. Neither will it help to solve the problems of the practice of medicine.

In localities where specialist's fees are too high the chief cause can usually be traced to the clinics. It is rather hard to get something for nothing in this world and when a community compels its medical men to give half of their time to clinics, then the other half of the community is of necessity compelled to pay double for what it gets.

On the next page of the paper I first referred to, we are told that in cases of serious illness it cost \$25 and \$30 per day for medical attention. Is this the strict truth, such as should be furnished to the lay critics of medicine as it is? As a matter of fact, anyone sick in Schenectady County can get very adequate hospital attention, including nursing, laboratory examinations and care by their physician of choice for not over \$5 per day. Even in surgical cases the average cost of a four weeks' ill-

ness, including surgeon's fees, hospital and accessory charges for our pay patients, unless they elect to have the luxury of a special nurse, is only about \$6 per day. In some cities the hospital charges are higher than with us, but at most this makes a difference of only about \$1 per day.

Is it strict scientific accuracy for us to have all this propaganda for State-Subsidized so-called Health Centers without telling us how similar state subsidies have worked in other states? Surely such a simple scheme for a medical Utopia and getting money from the tax payers has not been overlooked in all of the states until 1920. This plan has been in operation for many years—more than a quarter of a century—in Pennsylvania. I have lived in Pennsylvania and, while I do not want to pass judgment as an expert, my observations always led me to believe that it was bad for the doctors and worse for the public. One thing is sure, and that is, that after all these years Pennsylvania has fallen decidedly behind New York both in the relative number of physicians and the relative number of hospital beds available.

To my mind one of the most misleading statements which has been put forth in connection with the Health Center propaganda is that it is a complete answer to Compulsory Health Insurance. This statement has been frequently made. From the experience of Pennsylvania, I would say that it will tend to force rather than to prevent Compulsory Health Insurance. As a matter of fact the proponents of the two plans are barking up different trees. The two projects do not cover the same ground. To my mind sickness insurance applied to the insurable portion of the sickness problem and stripped of the cure-all fallacies of trying to cover by insurance method the common run of short-time illness would be far more effective than the so-called Health Center plan.

We are told in the July *Bulletin* of the New York State Department of Health, page 195, that the Health Center plan as adopted in Erie county is a forerunner of "Free Health, by which is meant that rich and poor alike will some day enjoy the highest possible degree of medical skill with the cost spread on the general tax rate." This statement is printed in the official bulletin of our State Department. It is

spread broadcast for lay men as well as medical man to read. It will be quoted freely by all those paid secretaries and other *parasites of modern society whose salaries depend upon their uplifting something or somebody*. The statement should represent the real truth, scientifically accurate as far as it could be in July, 1920. Is it the truth and is it accurate? There are 15,000 physicians in this state working on an average as hard as men can work efficiently. We need no fewer; we could use more. Certainly we could not induce 15,000 men to undertake the arduous years of training and expense necessary to become a physician without offering them a promise of an average gross income of at least \$6,000 each, which would mean a net income of about \$3,500 per year. For a position under State Medicine, minus the not inconsiderable satisfaction of a free occupation, I am sure that even the \$3,500 net would not be sufficient inducement. And yet do you realize that $6,000 \times 15,000 = \$90,000,000$? I, for one, do not believe that the human animal is so constituted that 10,000,000 of these beings in the State of New York will ever be induced to raise \$90,000,000 in taxes for just one item of this universal free medical care, even though it be labeled under the absolutely false title of "Free Health."

I wonder if the *Bulletin* gives us the whole truth concerning "Free Health" under municipal medicine in Erie County. In the Canadian papers I have been reading advertisements of the Buffalo Department of Hospitals and Dispensaries offering pupil nurses an eight-hour day, no menial labor, all the usual inducements of a training school and \$20, \$25 and \$30 per month cash while in training. It might be very interesting to know what there is about the municipal free health plan of Erie County that necessitates their advertising such inducements to pupil nurses.

I venture to predict that when we organize the whole state on a plan that requires us to furnish board, room, clothing, teaching, training and \$20, \$25 and \$30 per month to pupil nurses in training that we will have some trouble inducing the tax payers to foot the nursing expenses incident to the "Free Health" scheme. Also, from my knowledge of the human animal as he is actually constituted, I

will venture to suggest that possibly about this time we might be compelled to offer \$50, \$60, and \$70 and \$80 to medical students while in college, and that for recruits we would get a class of fellows who had doubts of their ability to earn their own living in freely competitive undertakings not associated with state subsidies.

In conclusion let me again state that I have no fears of real scientifically accurate truths concerning the practice of medicine. I do dread and somewhat fear the propagandist. I want to ask you of the New York State Sanitary Officers Association to see to it that the public is given only the real truth concerning one of the most vital points of contact between the physicians and the public—namely, in regard to the practical possibilities of preventive medicine.

DIFFICULTIES ENCOUNTERED IN DEALING WITH MENTAL AND DELINQUENT CASES.*

EDW. A. FOLEY, M. D.,
CHICAGO.

From time to time various communities are startled by the misdemeanor of some so-called half-wit.

Immediately the local press flies off at a tangent and numerous recommendations are advanced for the uplifting of society in general.

The judiciary, the bar, as well as the clergy, all sit up and take notice. All are ready with impractical theories for the rounding up of the "moron." Public officials charged with the care of mentally deficient are subjected to unwarranted criticism from all sides. Notwithstanding the furor that has developed, no one offers anything practical to improve conditions of society or to protect the unfortunates lacking in mental makeup.

During this period of excitement many public citizens come together in mass meetings. Committees and sub-committees are appointed to take up the moron question. Some of these committees may meet, but the most of them fail to come together after the first flash in the pan. After a time the press cools on the subject, there being other things coming up to make good newspaper copy. The doctor, lawyer, clergyman, and tired business man return to their daily work and the

poor moron is forgotten. Yes, forgotten until the next tragedy, then the whole burlesque is again rehearsed before the public eye.

Due to the awakening of press agitation, officers of the law become active in apprehending all suspicious characters. Into the melting pot are thrown psychopaths of all descriptions.

Admissions to hospitals for the insane show an increase for the time being, and with the frank insane are mingled borderline cases and delinquents. The latter soon adapt themselves to institution routine. When visited by relatives and friends requests soon come for their release.

The relatives can not see anything wrong in their makeup and demand that liberty be granted. These requests being refused, influence from one source and another is brought to bear.

The delinquent boy or girl may have someone high in political circles who intercedes in his or her behalf. Again some uninformed or misguided individual takes it upon himself to exert pressure of various kinds to return John Doe to his home and old haunts, losing sight of the fact that John has been a ne'er-do-well all his life; that he has been in conflict with authority on many occasions, and is decidedly anti-social. Still he can not see why John should be detained.

Sometimes the ear of the press is obtained and without just investigation an attack is made for the return of the delinquent to society. This attack many times comes from the same press which a few weeks previous was loudest in demanding that society be protected. But the story is sensational. The copy is good. So, let the public take care of itself.

Just recently a letter was received at one of our state institutions from one high in authority requesting the parole of a delinquent girl. At the time of admission through the Psychopathic Court, this unfortunate was well advanced in pregnancy, although not married. A psychometric test showed she had attained the mental age of only ten years. Her actual age was twenty-one. Her seducer, from general appearances, was of low intelligence, probably of no higher degree than the delinquent in custody.

On pretense of giving the patient a car ride, the girl's sister took her from the institution grounds one day. While out the pair were met by the girl's seducer. They went before a clergyman and the delinquent girl and her lover were

*Read before Chicago Medical Society, April 1, 1920.

married. The gentleman officiating at the ceremony knew at the time that the girl was an inmate of an institution.

Upon returning to the hospital a request was made by the husband and sister for the parole of the delinquent girl. This request was at once refused. Hence the above-mentioned letter. The author of the letter is a man high in public circles who should at least have investigated the case before asking that the girl be liberated. For her sake this request was refused. She will be given protection so long as no outside influence intervenes. The unborn child will be allowed to take its place in the sun just as children of normal parents. As the years roll by another delinquent will probably become a public charge.

To illustrate further interference, permit me to quote from the case history of F. B. B.'s age was forty-two years and six months. A psychometric test showed a mental age of between ten and eleven years. Besides, this man had been a confirmed alcoholic for years.

His mate in life was also of a low order of intelligence, registering eight years and nine months mentally. The six offsprings from this pair were all below par mentally; the oldest girl a low grade moron; John, the next child, a borderline; Charles was dull; Eddie, aged thirteen, a high grade moron. The two youngest children were not old enough to respond to psychometric tests, but were dull.

Notwithstanding the fact that the man was considered dangerous to his family and neighbors, doctors, lawyers, and law makers brought all pressure they could to have him turned loose on the public. The requests were refused time and again.

In the spring of 1919 the man's wife died. His brother and other relatives asked if he could be taken home to attend the funeral. His conduct had been excellent during the past year, so on the promise that he would be immediately returned after the burial services were over, he was permitted to go.

The brother and other relatives forgot their promise, however. Three days after he went away the following letter was received from a prominent judge:

"I have had before me this morning one F. B. No. —, and I am convinced by the testimony of witnesses and by observations

of Mr. B. himself, that he is of sound mind. I have therefore entered an order restoring him to his rights."

This letter was dated June, 1919. A letter from the same judge some months previous stated that the man was not to be released without notifying his office. In this letter he stated the man's wife lived in constant fear of him.

The United Charities of Chicago had this man and his family under observation for some ten years. Yet, when it came to restoring him to his rights they were not consulted. Neither was the hospital management.

Investigating the records in this case fails to show who the witnesses were who pleaded for the man's liberty. The only thing that could be found was a petition signed by his neighbors and addressed to a certain alderman. Across the petition was written in lead pencil:

"On June 2, 1919. This man was at my office last night with a lot of his neighbors. He looks all right to me.

(Signed) Alderman Blank."

On the folder of this record was written, "Restored."

The fact that B. had always been a cruel father and husband; that his oldest girl was afraid to remain alone in the house with him; that he had been a drunkard for twenty years, had no bearing on the case when Alderman Blank stated he looked all right to him. So far as the judge was concerned this was evidence enough for him, so B. was turned loose to do as he saw fit.

A follow-up by our social service department brought to light the following:

Sometime after B. was liberated he again married. This time his mate was a widow with three children. The oldest girl of B.'s left home shortly after her father's marriage.

In all probability B. will become the father of another group of defective children.

Equally interesting is the history of a young psychopath, K. At the age of fourteen years this boy disappeared from his home. Nothing was heard from him for three years. At this time he returned to his home and family ties. Boastingly he related his exploits since going away. He told of playing deaf and dumb and begging on the streets of New York; also, of selling small trinkets and earning a living by his wits. He also told a story of having been confined in the

Tombs and escaping therefrom. This, however, was never verified.

Shortly after his return to Chicago he developed ideas that secret service men and spies were following him. He appealed to the police for protection. The police realized something was the matter with the boy's mental condition, so they sent him to the Psychopathic Hospital.

Immediately following his admission to a state hospital his relatives appeared on the scene and demanded his release. So far as they could see there was nothing wrong with the boy's mental condition.

This request was refused, but by 1911, one year later, his condition had improved so that parole was considered advisable.

Following this period he was in and out of the institution several times until his last commitment in 1917.

Just prior to this last admission an investigator for the Mental Hygiene Society paid a visit to the boy's home. He was found strapped to a bed. There was no bed linen. The boy was lying on two mattresses. The windows of the room were barred. Interrogating two neighbors, it was learned that when this boy became disturbed he tore his clothing, bedding and mattresses, broke windows and furniture. He refused to keep any clothing on, and would run out of the house nude. During these attacks his mother betook herself and the three smaller children to the basement and locked themselves in until the attack subsided.

In the face of all this his relatives presented a note written on a physician's prescription blank which read as follows:

"This is to certify that Mr. K. has been examined by me and is in perfect health and of sound mind."

Owing to inability to adjust himself to conditions outside of a hospital and improper supervision by his parents, his commitment in 1917 resulted as quoted above.

Again his people came and repeated their requests to have him liberated, which were refused for the following reasons:

First. For the protection of the boy.

Second. For the protection to the other children in the family.

Third. Several trials demonstrated he could not get along at home.

When his father saw that the hospital management would not release the boy he began to see what influence would do to get his son out. Letters began to pour in from prominent men living in and out of his district. Many of these letters came from physicians.

One physician stated he had known the boy's parents for years, and that they were always peculiar, but that the boy was all right.

These requests were all refused for the reasons given above, and because no improvement could be noticed in the boy's mental condition since his last admission.

Finally a writ of habeas corpus was applied for and granted. The boy was produced in court. The judge looked wise; did not investigate the record; told how much he knew about psychiatry and the mentally unfit; then, without questioning a witness, turned the boy over to the custody of his mother. She was to report back to the court within a month to see how he was getting along. So far as the hospital goes no information regarding the boy was obtained until a social service worker set out to see what had become of him.

The court record shows that the boy was produced before the judge twice. On the last visit an order was entered on the docket as follows:

"Discharged to his mother because he is harmless to himself and others and not insane, according to statute."

A visit to his home proves facts contrary to the opinion of the judge so far as insanity was concerned. From a neighbor the investigator learned that the boy sat in a chair by the window all day long; that he was entirely helpless, being waited on by his mother at all times; that he spoke very little, but at times would cry out in a loud voice.

The question arises: What influence does this demented boy exert on the rest of the family and children of the neighborhood? Would not everyone be far better off if cared for by those trained to look after such cases?

The case of Anna C., aged thirty-nine, is also one of interest. Her husband was a tabetic, besides his mental age was only eight years. The family had been registered with the United Charities of Chicago for a number of years.

Owing to the overcrowded condition of the school for feeble-mindedness the father and

mother were sent to a hospital for the insane. The three oldest children went to the Juvenile Detention Home. The youngest child went to St. Vincent's Asylum, pending action of the Juvenile Court.

The mother was well advanced in pregnancy when admitted. When the child was born it was taken care of by the patient's sister. Not long after the birth of the child requests for parole began.

The wife's relatives were more persistent for her release than her husband's. Yet, of the two, he was the brighter. Influence of all kinds was brought to bear, but without result.

Finally she was produced in court on a writ of habeas corpus. This time evidence by social workers, representatives of the United Charities, and a hospital physician was submitted. The judge, however, turned a deaf ear to all this and gave the woman her liberty. He commented on the case in these words, "She might be a little defective mentally, but she is harmless."

Previous to this trial her husband eloped from the hospital. The social service department set out to ascertain if this pair had come together. The investigator found Anna living in a basement with her sister. She had secured employment in a box factory at two dollars a day. Three children are in the Bohemian Old People's Home. Nothing has been heard from the husband and father since he left the hospital, but there is a great possibility that they will bring forth more defective children.

Not all the interference, however, comes from the legal fraternity. Some members of the medical profession are not honest with themselves or the public when it comes to the matter of giving advice to relatives who may have some one in a hospital.

Only a short time ago two people representing themselves to be graduates in medicine visited a delinquent girl in one of our hospitals. The poor child had given birth to a baby previous to admission. Her sister was also morally delinquent, and at one time an inmate of the House of the Good Shepherd. The father of these girls was low down in the mental scale. Our patient had been receiving visits from a male whose general appearance would indicate a mental defective. As soon as these visits were discovered the boy was informed he must remain away from

the hospital. The father and sister tried on several occasions to bring him in, but these attempts were frustrated.

Then requests came from the above-mentioned relatives to parole the girl. These requests were all refused. Then followed the visits of the above-mentioned doctors. Whether or not they are bona fide graduates in medicine, I do not know. Their names do not appear in any medical directory. Both of these individuals took the stand that the girl was well mentally and should not be detained. When these demands met with refusal they sought the press. Without investigating the merits or demerits of the case, a vicious attack was made on the hospital management. Of course, this malicious story was read in many homes, causing numerous unhappy nights and heartaches.

If this paper would have its medical man visit our state institutions and see what is being done to alleviate suffering and restore mental cases the paper would be doing the public more good than by taking the destructive policy which it pursues.

Of course, I do not wish to make it appear that the last word has been said when it comes to dealing with the insane. Just criticism will always do good and stimulate the one subjected to the ordeal to do better and to improve conditions.

Misrepresentation at the time of commitment also makes a great deal of trouble in detaining cases as long as they should stay. When a patient is told that he is being sent to a hospital for such a length of time, he looks upon his retention the same as a prisoner. Likewise, the relatives will tell you that John Doe has been sent out by the judge for three weeks and that they have come to get him. It takes a long time and much reasoning to convince them that the patient is sick mentally and not a prisoner. Sometimes the task is easy, but most of the time it is not.

In presenting these facts I am not attempting to bring censure upon any head. All any of us ask is a square deal and co-operation from members of the medical profession. I would suggest that when some one asks you to aid in the liberating of this one or that, you make all due investigation before acting. Be square with the public, yourself, and the patient, then conditions

will be much better. As far as recommendations to the lawyers and clergy, I have no comments to make.

To the public in general permit me to state, your responsibility does not end when a delinquent or psychopath is committed to an institution. What the public and press call a moron may be a psychopathic delinquent who is keen and clever. Our institutions are not impregnable. Elopements may take place. Hospitals for the insane and feeble-minded are taxed to their utmost capacity. The last session of the legislature changed the law so that the Dixon State Hospital will admit feeble-minded just as soon as the buildings are ready.

Last, but not least, don't begin agitating the release of delinquents as soon as committed.

INDIVIDUAL PREVENTIVE MEDICINE*

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The war, through its wholesale examination of soldiers, helped to awaken physicians all over the world to the need of individual preventive health. Public health had already made rapid progress through its attention to our water supply, our sewerage and our general sanitation; but the war gave to public health an added stimulus which proved that health conservation from that quarter still needed developing. It is not, however, to public health but to preventive individual health that I wish to call your attention.

Sir James Mackenzie, in his "The Future of Medicine," says: "Medicine has advanced so far that, for the study of disease after the patient has died, we find institutions magnificently equipped and presided over by men of great experience and training. For patients suffering from the advanced stages of disease, we have great hospitals with staffs of skilled physicians, surgeons and specialists. If we seek to find out what are the facilities for the detection and cure of disease in the stage when it has not damaged the tissues, we discover that little consideration is given to this aspect of the matter."

There are few physicians who believe in a specific drug cure for the many different diseases known to man, though there are a few diseases

which have such a cure. It is really then prevention which must concern us, and this prevention must be individual. I have chosen this subject not because my views are original but in the hope that, in my review of the literature and in the work I believe can be done, I might present something of practical value.

It is estimated² that there are 25,000,000 boys and girls between the ages of 6 and 18 years, and that fifty per cent. of these young people have physical defects, many of which could be cured providing the individual had had a careful physical examination and early diagnosis. Boys and girls, young men and young women go through high schools and colleges which are provided with gymnasias, and many of them leave with the same physical defect which they had on entering. These physical defects a good gymnasium could and would often correct had there been a careful examination and diagnosis. But, it is not only the young with whom we are concerned; we find these defects exaggerated in all ages.

Our first concern then must be to make an honest diagnosis. This means that every individual, whether he complains of definite symptoms or of symptoms which are vague and obscure, must be stripped and examined for signs of disease. We, as physicians, may well learn a lesson from the old family doctor: that of close observation while listening intently to the individual's symptoms. How many of us closely observe the individual as he enters the examining room, the manner of his walk, the posture of his body, his apparent age, etc.? How many of us listen intently to his symptoms before making notes on the history? Dr. Henry A. Christian³ says:

"Diagnosis, in final analysis, depends on proper evaluation of symptoms and signs, recorded by all available means and interpreted with the critical judgment of a large common sense. It needs to be recognized that symptoms antedate signs and that the beginning of disease may be present and productive of symptoms when no available method can detect abnormality in structure, and even tests of functions record no change."

If we are to practice individual preventive medicine then we must give our attention to the symptoms of which the individual complains. Such symptoms, for example, as eye strain, head-

*Read at the Seventieth Annual Meeting of the Illinois State Medical Society at Rockford, May 19, 1920.

ache, painful and tired shoulder and neck muscles, back-ache, constipation, dysmenorrhea, etc. A large factor in the cause of such symptoms is bad postural habits. Good posture in an individual means a normal adjustment of all parts of the body.⁴ "Man's supreme inheritance is the product of his power for poise." There is no one physical defect more common to the individual than faulty posture and malalignment of the spine, and it is a defect to which little attention is paid. It may cause many of the disabilities, both physical and mental, of which the individual complains and has much to do with the behavior of the individual. Sixty-five per cent. of all criminals have a posture which is known as the posture of failure. It is a defect which can be corrected by education and re-education of conscious muscle control. The individual may complain of symptoms due to bad postural habits, symptoms so closely dependent one on the other that they cannot be separated. He may complain of headache, for example, and the physician inquires immediately into the individual's way of living, the condition of his eyes, his bowels, etc. How often, as physicians, do we examine the posture of the individual. Yet it has been proven⁵ that more marked muscular unbalance is found in the eyes of cases of bad posture, from whatever cause, than is found in a similar number of cases referred especially for eye examination. A study of nervous anatomy reveals the reason for this. It is sufficient to say that postural strain may directly or indirectly disturb the equilibrium of the body and the nervous mechanism of the eye. The correction of faulty posture of the individual with headache will remove not only causes of eye strain but will improve the muscle tone of the body, and thereby the muscle tone of the eye, and eliminate, as I shall try to prove, many symptoms of ill-health so common to the individual.

Every day individuals consult physicians complaining of pain in the sub-occipital and cervical regions; painful and tired shoulders and neck muscles, or a burning numbness in this region. These individuals are too complacently diagnosed neuritis and neurasthenia without a careful examination and search for the cause.⁶ An examination usually reveals faults in posture, rounded shoulders, the head thrust forward, marked dorsal or lateral curvature, and the plane

of the shoulder girdle out of line with the plane of the pelvic girdle. The position of the head is altered to compensate this deformity, and there is a consequent strain of the muscles and ligaments which become sore and sensitive. Having found such a condition we must, as I have said, search for the cause. One individual will be found to be the victim of faulty postural habits; another will suffer from occupational strain; for example—the auto driver, the stenographer, or those engaged in any occupation which keeps the head fixed; another well nourished individual will be found to have large pendulous breasts, their weight causing round shoulders, dorsal curvature, and consequent muscle strain; and still another may suffer from pressure of an abnormally long seventh cervical spinous process causing a burning, tingling numbness.

Closely related to pain in the cervical region is that very common complaint, backache, a complaint usually ascribed by the laity to kidney or pelvic disease.⁶ We find, upon examining the spines of individuals, abnormalities especially at the cervico-dorsal, and lumbo-sacral junctions, with a consequent wrong attitude of the pelvis, thorax, head and neck. Many different types of backs will be found, such as the rounded hollow back with ribs crowded together, the long, round back which allows the shoulder girdle to overhang the pelvis, or the sway-back of the well nourished individual with heavy abdomen, etc. Wherever there is a wrong spinal alignment there will be tension on muscles and ligaments, and the individual will complain of nervousness, irritability, backache, or pain radiating into the abdomen and legs.

In order to practice individual preventive medicine these faults in posture must be corrected in the young, thus preventing such disabilities in their infancy. Fortunately, the extensive paraphernalia of the gymnasium has been relegated to the scrap heap; instead, we find bare walls, mats and stools; a gymnasium which is within the reach of all. In treating the individual already suffering from faults in posture we must know in detail what must be done and how to transmit this detail to the individual for the treatment must be individual. Exercises are given where large groups of muscles are used, slow, easy, big movements, movements off the feet, exercises which relax muscles,

corrective exercises to correct the spinal malalignment and develop the chest and abdomen; for example—lordosis, or hollow back, requires exercises to stretch and flatten the lumbar region and strengthen the abdominal muscles.

The prevention of tuberculosis is a problem of grave importance and one which concerns every physician. He is alive to the early signs of this disease and alert to make an early diagnosis. He is familiar with the phthisical type of chest, a chest which shows at a glance a faulty posture. Not all individuals with phthisical chests develop tuberculosis, nor do all tuberculous individuals have such chests, but all tuberculous individuals show to a greater or less degree faulty posture of the weight-bearing structures and lessened muscle tone. A posture which interferes with the normal function of the organs of respiration, circulation and digestion. It behooves us then to give our attention to correcting faulty postural habits early before this disease has damaged the tissues; thus, we may be able to add another link to the chain in our effort to prevent tuberculosis.

The irritable heart of the soldier is another example of a disability in which faulty posture and lack of muscle tone are contributing factors. These men are taught by their family and their physician to avoid exercise and fear of overdoing adds a mental element. Carefully graded exercises suited to each individual are planned. Here again exercises are employed using large groups of muscles, easy movements with slow rhythm requiring the concentration of the mind on the work. By education and re-education of conscious muscle control these men acquire the capacity to live beyond themselves and lead efficient lives.

The posture of the organs of the body, in order that they may function normally, is as important as the posture of the weight-bearing structures, but their position is dependent to a great extent on normal muscle and joint alignment. When we consider visceroptosis, orthostatic albuminuria, mal-adjustment of the female organs and the posture of the body which always accompanies this picture, we can appreciate the effect of well directed exercise; for example,⁶ "Correcting the position of the shoulder girdle pulls up the cervical fascia, the diaphragm and abdominal viscera," enlarges the size of the thorax, and increases the muscle tone. The

normal function of the abdominal organs depends on normal position. These organs are held in place by their own support, by intra-abdominal pressure and by the normal adjustment of the muscles and ligaments of the body. Many common symptoms, both physical and mental, are referred by the individuals to these organs. The most common symptom is that of constipation. I shall not attempt to classify the various forms, nor shall I attempt to show the well known results of this disability. I do, however, wish to emphasize the fact that constipation is a symptom which is usually accompanied by faults in posture, and a symptom which cannot be separated from other symptoms of which the individual complains. Exercise and right living will help to cure an individual of constipation only when the posture of the body is also corrected. Of what avail to prescribe right living and exercise such, for example, as long walks, when the individual has faulty spinal alignment and is wearing shoes with high heels which alter the longitudinal axis of the body and cause a strain to be put on every organ. Consider the thin nervous individual who complains of symptoms referred to the stomach, the intestines or the pelvic organs, an individual who cannot tell a connected story, and one who is too commonly diagnosed a neurasthenic. Examination will reveal that this individual is the victim of faulty spinal and joint alignment, and loss of muscle tone. We, as physicians, too often close our eyes to the existence of the mind and its importance in such disease conditions.

Dr. John Bryant⁷ says that a "Systematic development of muscle sense co-ordination and control, with a view to developing not only muscle control but to correcting certain mental tendencies of the chronic intestinal invalid, is a new application of an old principle, or one not sufficiently known or used." The muscular energy of chronic intestinal invalids is below normal, they have the fatigue posture and are unable to completely relax their muscles. The rate of exercise he says must be slow—10 seconds per foot to 5 second per foot. No one can raise and lower his abdomen muscle slowly without keeping his mind very definitely on the job. Mental concentration is one of the prerequisites of mental control. The rate of muscular movement must be slow, using large groups of muscles and in the Trendelenburg

position if the individual has ptosis. Many individuals with constipation are relieved by training for good posture, while muscular exercises are given to tone the circulation, increase the peristalsis, and strengthen the muscles of the abdominal wall.

Much has been written on the subject of menstrual irregularities, dysmenorrhea, and the effect of abnormal position on the female organs of generation. It is said that* "The key to posture is the attitude of the pelvis first, thorax second, head and neck third." If this be true, physicians must examine the individual not only for misplaced organs of generation, and for the many other causes of menstrual disorders, but they must pay especial attention to the attitude and muscle tone of the body. Perfect poise in standing and walking can only occur in the bare feet. How important then is the question of shoes, if we are to work for good posture and eliminate these disabilities. Dr. Clelia Duel Mosher has in a large number of cases corrected this condition by the following method:⁸

All tight clothing having been removed, the woman is placed on her back on a level surface in horizontal position. The knees are flexed and the arms are placed at the sides to secure perfect relaxation. One hand is allowed to rest on the abdominal wall, without exerting any pressure, to serve as an indicator of the amount of movement. The woman is then directed to see how high she can lift the abdominal wall without straining, then to see how far the hand will be lowered by the voluntary contraction of the abdominal muscles, the importance of this contraction being especially emphasized. This exercise is repeated ten times night and morning in a well ventilated room, preferably while she is still in bed in her night clothing. She is cautioned to avoid jerky movements and to strive for a smooth rhythmical raising and lowering of the abdominal wall. The bladder should be emptied before the exercises are begun. The exercises must be continued for a considerable period of time to accomplish any very striking results, long enough to develop these muscles and to establish their more or less constant use without conscious effort.

CONCLUSION

The future must be our concern if we are to practice individual preventive medicine. We must give our attention to early symptoms and signs—make a careful examination using every available means to detect physical defects, in other words, make an honest diagnosis. Having made this diagnosis we must be honest in our treatment.⁹ "No longer is our highest aim to

cure but to prevent disease. A fuller knowledge of the etiology has led to a return to methods which have for their object, not so much the combating of the disease germ or of its products, as the rendering of conditions in the body unfavorable for its propagation and action."

I wish especially to emphasize that everyone, young and old, needs training in good postural habits, if we are to accomplish this.

Such habits in the child will often prevent disease by making conditions unfavorable for the growth and multiplication of disease germs. In individuals with disease symptoms, the posture of the weight-bearing structures and the muscle tone of the body must not be overlooked.

Symptoms of headache, dizziness, nausea, backache, etc., will often be found to clear up when the posture of the individual is corrected and muscle tone restored. The poise and muscle tone of the body must never be forgotten as a factor in conserving acuity of vision.

The chronic invalid, whether suffering from chronic intestinal conditions with loss of muscle and mental control or from an irritable heart, can by education and re-education of conscious muscle control be salvaged and given new standards of life. We cannot close our eyes to the effect of correcting bad postural habits and restoring muscle tone on the mind of the individual. It must be remembered too that the central nervous system lacks tone as well as the muscles. Conscious muscle control requires mental concentration and will-power in the treatment of every individual with faulty posture. It must never be forgotten that such an education may extend over a long period of time. Especially in individuals where the attitude of the weight-bearing structures has to be remodeled and co-ordination and muscle tone restored.

Not every physician is an orthopedic specialist, but the National Young Women's Christian Association and the National Young Men's Christian Association are establishing gymnasiums all over the country, and employing well-trained physical directors to give individual training to the individual who has had a careful physical examination by a physician and is found to have postural defects and loss of muscle tone. These physical directors know in detail what must be done to correct the defect, and how to transmit this detail. We, as physicians, must realize the

enormous importance of such measures as diet, massage, hydrotherapy, and exercises which correct the posture and restore the muscle tone in the treatment of the individual, a treatment to which the physician has paid little attention, and one which is being used too often by men who are unable to make a diagnosis and who are outside the medical profession.

EXERCISES FOR ANTERO-POSTERIOR FAULTY POSTURE

TYPE I LONG ROUND BACK Kyphosis

For back and chest

1. Free standing—or sitting—arm exercise.
 - 1—Arm raising sideways, rotate upward.
 - 2—Arm raising sideways, upward to stretch position.
 - 3—Arm circumduction.
 - 4—Cross D., arm circling.
 - 5—Swimming movements, palms up.
 - 6—Arm extension from bend position, sideways and up. —app.—Mirror.
2. Chest expansion.
 - 1—Poles—standing, cross and grasp position; expand chest and contract abdomen with inhalation. —app.—Chest poles, doorway.
 - 2—Corner, same as 1, from cross A with palms against wall.
3. Prone—lying, trunk raising.
 - Hands—West Point, or at neck. —app.—Plinth, table, stall-bar benches, mat.
4. Prone—lying, leg raising backward—single and double—Hands touching under forehead or grasping apparatus. —app.—Plinth, table, mat.
5. 1—Prone—lying on plinth, hands hanging, grasping dumb-bells; raise dumb-bells to horizontal and rotate upward. or
2—Stretch—prone—lying on mat, grasping dumb-bells; swing arms backwards and sideways to straight line, rotate upward. —app.—Plinth, mat and dumb-bells, 1-4 lbs.
6. Lax—standing, arms reaching toward floor, raise trunk with arm circumduction. —app.—Bom, or free standing in stride position.
7. Prone—standing, holding, or prone—sitting, holding. —app.—Bom, plinth, stool.
8. Sitting or standing, swing wand forward upward over head, bend arms and bring wand down behind scapulae. —app.—Wooden wand, steel wand, bar-bell.
9. Balance—weighing position. —app.—Low bom, horizontal bar.
10. Head—hanging. —app.—Horizontal bar.
11. 1—Stride sitting, trunk bending sideways, alternately.
2—Stride sitting, trunk twisting sideways, alternately. —app.—Plinth, bench. For abdominal muscles
12. Knee bendings.
 - 1—Standing, with support, alternately. —app.—Peg-post, stall-bars.
 - 3—Lying, alternately. —app.—Plinth, mat.
 - 3—Hanging, both together. —app.—Stall-bars, peg-post.
 - 4—Lying, bicycling, large circles, heels leading. —app.—Plinth, mat.

EXERCISES FOR ANTERO-POSTERIOR FAULTY POSTURE

TYPE II. Hollow Back—lordosis—to stretch and flatten lumbar region back and strengthen abdominal muscles.

1. Lying, knees bent, pull knees up to chest. —app.—Plinth, table, mat.
 - 2—Spread knees and touch shoulders or beyond.
 - 3—Straighten knees and touch floor over head. (Roll over.)
2. Lax—standing over Bom, straighten back slowly with arms at side, head coming up last, abdomen contracted. —app.—Bom, bar, chair back.
3. Long—sitting.
 - 1—Stride—sitting on plinth, swing legs up on to plinth, knees, straight, hold. Arms West Point position, or at neck.
 - 2—Stretch—long—sitting, bend and reach forward to touch toes.
 - 3—Sitting Turk fashion on mat or floor, stretch legs forward to long sitting.
4. Hook sitting, alternated with long-sitting touch toes—Hands resting lightly on knees.
5. Bicycling—Adams. —app.—Mat and panelling on wall.
6. Scissors on back—Adams.
7. Side-lying, double knee bending, and stretching. —app.—Mat.
8. Lying on 2 stall-bar benches placed end to end, head touching grasping stall bars, climb up bars with feet. —Miss McKinstry.
9. Treading. Kneeling, head resting on folded arms—stretch R. leg back, replace—Repeat L. —app.—Mat alternate—20-30 in groups of 10.

EXERCISES FOR ANTERO-POSTERIOR FAULTY POSTURE

TYPE III ROUND HOLLOW BACK Kypho-lordosis

To straighten and strengthen dorsal region without increasing the lordosis and to reduce the lordosis without increasing the kyphosis

Combinations of exercises for Type I and Type II

1. Treading.
2. Prone—one-half lying, trunk raising, hands at neck, localize in upper back. To be followed immediately by an abdominal exercise, as 3.
3. Lying double knee bending.
4. Lax—support—standing, No. 2 in Type II.
5. Hanging, double knee bending.
6. Head—hanging, double knee bending.
7. Long—sitting on plinth, with wand swinging over head.
8. Dumb-bells on plinth in prone—one-half—lying position.

EXERCISES FOR LATERAL CURVATURE

SINGLE CURVE TO LEFT Reverse for right curve

All symmetrical back and abdominal exercises

1. Low—hanging, legs extended to left, raise L. leg. —app.—Stall bars, low bar.
2. Left side holding—Klapp's creeping position. —app.—Mat.
3. 1—Right side—right arm stretched under head, left arm at side—raise left leg. —app.—Plinth, mat.
4. Right side—lying—right arm bent over head, left arm at side—feet supported—trunk raising to left. —app.—Plinth, table, mat.
5. Prone—lying—right arm bent over head, left arm at side, feet supported—trunk raising to left. —app.—Plinth, table, mat.
6. Flex—twist—bend—standing, holding. Hands at neck, flex trunk forward, twist by shoulders backwards to left and bend trunk to left. Preserve flexion, twist and bend. McKenzie-Forbes. —app.—Low bom.
7. Spring—sitting, left. Prone—sitting across stool, right arm stretched upward, left arm stretched backward and rotated outward, right leg stretched backward. —app.—Bench or stool.
8. Self-correction—Hoffa. Stride—sitting, right hand over head, left hand on side

—at center of convexity—pull and push up and to right until spine is straight or overcorrected, bring arms to side and hold overcorrected position. Follow by No. 9.

9. Stride—sitting, trunk twisting to left.
Hands at neck, twist trunk backward to left.
—app.—Plinth, hench or stool.

EXERCISES FOR LATERAL CURVATURE

COMPOUND

STRUCTURAL

RIGHT DORSAL, LEFT LUMBAR

Reverse for opposite curves

1. Right side—lying—right arm at side and under trunk—left leg raising.
2. Prone—lying, spinal extension.
Grasp plinth at height of shoulders.
Push forward with head and backward with feet.
or
Lying—stretch heels and head away from each other.
3. Hanging, left knee bent upwards.
4. Spring—sitting, left arm up, right arm and leg back or—with level shoulders,
right leg back and both arms up, at neck or side.
5. Stride—sitting, raise heavy bar or bar-bell while holding position of best correction, return bar to lap, maintaining correction.
—app.—Plinth, stool or bench.
Steel wands or bar-bell.

EXERCISES FOR PTOSIS

From Trendelenburg position—lying with hips and legs raised, head and shoulders low

1. Hook—lying, double knee bending.
2. Hook—lying, lift trunk from plinth with abduction of knees.
3. Hand—kneeling, swing forward and back.
4. Bicycling—Adams.
5. Lying on two stall-bar benches, climbing bars with feet.—McKinstry.

EXERCISES FOR DYSMENORRHEA

1. Mosher exercise. 5—rest—5.
2. Knee chest position.
3. Hand kneeling, swing forward and back 10-20.

EXERCISES FOR CONSTIPATION

1. Sitting, doubling over.
Sitting on chair, feet resting on opposite chair or stool 4-6 in. lower, R. arm placed across abdomen, bend forward quickly pressing arm into abdomen.
40-50 in groups of 5.
—app.—2 chairs or chair and stool.
2. Lying, alternate knee bending
or
Lying, double knee bending.
Increase strength by placing arm across abdomen 30-40 in groups of 10.
—app.—Mat, plinth, floor.
3. Standing, alternate knee bending.
4. Stride—sitting, trunk circling.
5. Stride—sitting, trunk side bending.
6. Stride—sitting, trunk twisting.
7. Lying, knees bent, abdominal contraction—10-20.
8. Treading—20-30.

EXERCISES FOR FEET

Short Tendo Achillis To stretch Tendo Achillis

1. Single tendon stretching.
Standing with forward part of R. foot on elevation, swing weight forward, keeping R. heel on floor, lifting L. foot from floor, both feet pointing forward.
Repeat left. 20-40 in groups of 5.
2. Double tendon stretching.
Standing 4 foot lengths from, facing, and with hands resting on support at height of hip joint—hands

shoulder width and turned in; swing weight forward with flexion in elbow and abduction in shoulder 15-30 in groups of 5.

Pronation, Relaxation of Longitudinal Arch.

To strengthen supinators and dorsal flexors.

3. Foot raising—dorsal flexion.
Standing, sitting or lying; toes together, heels slightly apart, raise foot inward and upward. Alternately and together, 10-20 in groups of 5.
4. Foot rolling outward.—Supination.
Standing; feet parallel and touching; raise inner border up and out, knees held straight, toes touching floor, 10-20 in groups of 5.
5. Heel raising and foot rolling outward.
Standing; toes together, heels slightly separated, rise on toes; roll foot outward and let heels sink with weight on outer border of feet 10-15. Omit when tendo Achillis is short, or when flexibility is excessive.
6. Foot circling—Supination and dorsal flexion.
1—Sitting; R. leg crossed over L. knee, make circles with R. foot up, out, down, in, up. Repeat left. 30-40 in groups of 5.
2—Lying; legs extended, feet parallel, motion same as in sitting.
7. Walking—1—on toes. 2—On heels, toeing in.
Relaxation of Transverse Arch—to strengthen planter flexors.
8. Foot gripping.
1—Sitting; feet parallel, spread toes, pull toes in and under as if taking hold of floor. Alternately and together 15-30 in groups of 5.
2—Standing.
3—Lying.
9. Walking with foot gripping.

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DISCUSSION

DR. LEDA STACY (Rochester, Minn.): Dr. Weld has very efficiently and very forcibly presented the subject. I wish to emphasize the importance of all this. Individuals may grow to adult life and their constitutions appear to be all right, but without the proper exercise they end up as nervous wrecks. The whole proposition is one of education. The education of the individual should begin with the school child. Up to 1903 we had practically no school inspection and no visiting nurses. After New York took the initial step, schools all over the country began to employ the visiting nurse and the full time health officer. The gymnasium in the Y. M. C. A. and Y. W. C. A. are now serving to develop much better physiques with the mental control and mental stamina that go with it. The school inspection and the education of the child in the school point to the importance of personal cleanliness and physical fitness.

Medical inspection in the school enables us to locate the presence of bad tonsils, adenoids and symptoms of tuberculosis. One of the things that has developed most beneficially through medical inspection is the discovery of incipient tuberculosis in the child. Careful attention should be paid to the poise and physical development of the child during his school life. If this were done the child would not develop later into the narrow-chested, round-shouldered, constipated, backaching individual. The physical education of the young must come largely through the medical profession.

Just one word, not so much as to the hygienic side as to the problem of cancer which we are facing now. Which must become a problem to the general practitioner, as the patient comes to the general practitioner for a diagnosis before he goes to the surgeon and the practitioner must assume the responsibility. For instance, the tumor in the breast; every woman should know that a tumor in the breast should be removed.

All of this comes back to the education of the young and the education of the physician and a complete thorough examination of every individual who comes to the physician.

DR. BERTHA M. VAN HOUSEN (Chicago): I think we can't appreciate too highly Dr. Weld's paper, because it gives us a solution to what I think is a very serious problem and that is, how can we combat the work of the osteopath? I think this little lady who showed us such wonderful exercises can do more in one single hour for probably a tenth of the money than the osteopath can do in three months, and she is willing to do this work under the direction and under the guidance of the physician. She expects the physician to make a diagnosis, and the patient will not go to the gymnasium leader and expect to have an operation for appendicitis or hernia, but she will expect to go to the physician who is a specialist and who knows just how to do that work.

I believe that we have a very serious problem in meeting the chiropractor and the osteopath, and I believe that Dr. Weld has given us the keynote of how we can do it.

PERSONAL EXPERIENCES IN U. S.
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CHICAGO

When I received orders directing me to report to the Commanding Officer of Debarkation Hospital No. 5, Grand Central Palace, New York City, two questions suggested themselves to my mind. First, I was anxious to know just what were the functions of a debarkation hospital and how it would be run. Second, I was anxious to know what sort of a hospital the Government had been able to build out of the Grand Central Palace. I was not alone in my desire to know this, because there were many officers, reporting shortly after I did, who asked the earlier arrivals a similar question.

It is my object briefly to set forth just how No. 5 was run during its existence. The Grand Central Palace, transformed into a hospital, certainly made a rather peculiar impression on one's mind, because when one thought of the Grand Central Palace one unconsciously thought of a building in which were held the automobile show, the flower show, the furniture exhibition, and in which there was a large dance hall. With that picture in mind, it was difficult to conceive a hospital having been made out of the Grand Central Palace. This building, located near the Grand Central terminal and having plenty of light and fresh air, was ideal for hospital purposes. Being of absolutely fire-proof construction, the danger of fire was at once eliminated. The large floor space was very easily subdivided into wards. The rapidity with which this change was carried out by the Government can best be illustrated by giving a few dates.

When Major Conger reported for duty at the Grand Central Palace on September 17, 1918, the building was filled with furniture. The dance hall was in full swing and a shooting gallery was in operation. A chemical exhibition was ready to move in. The first real convey of patients arrived on December 22, 1918. The constructing quartermaster began his work about the middle of October, so that whatever

changes were made in this twelve-story building were completed in about eight weeks.

The functions of this hospital may be briefly summarized as follows: To receive the sick and wounded from overseas, to delouse patients and their clothing, and to issue new clothing. A great deal of stress was laid on the fact that the men were all to be paid. Each patient was to be examined and classified; his injury or illness classified; after which he was sent to his proper destination. It was also the function of the hospital to treat the seriously sick or wounded cases from overseas until such time when they could safely be sent on to the various base, general, or specific hospitals, as the individual case might require. It was also necessary to treat illnesses arising in patients during their stay in the hospital awaiting evacuation, as well as to treat the various illnesses arising among the men of the detachment. The officers were sent to Lafayette House on 59th street opposite Central Park, so that this hospital only received enlisted men. The thing that impressed me about the general run of the hospital was the fact that it was planned to handle great numbers of men efficiently and quickly, and that as such it functioned very well.

On the ground floor of the hospital were located the receiving and evacuating rooms. The system for admitting patients was a simple one, yet one that worked rapidly and well. An idea of it may be obtained from the following data taken at random.

March 3, 1919. On this day 280 patients were admitted. Of the 280, 268 were ambulatory and 12 were litter patients. The patients were admitted at the rate of 240.13 per hour and the actual time of admitting the total number was one hour and ten minutes. The patients were brought to the hospital in ambulances which backed up to the rear of the building. The receiving room was in charge of Lieut. Gray. Each patient as he was admitted was given a serial number and form 55 A in quadruplicate, the original of which was the evacuation card. The evacuation stamp appeared on the back of this slip. Each patient was asked if he had a field card, service record, or pay card. These he was instructed to hold in his hand with his 55 A. Each field card was stamped with the date of admission. The patient was instructed

to have his identification tag in sight and ready to show. This line was then divided into two, the odd numbers going to the right and the even numbers to the left to desk No. 2, which was in charge of a registrar. Here the 55 A was stamped and card 55 A was filled out, particular attention being paid to name, rank, organization, serial number, name and address of nearest relative. After this was filled out, the patient was given his 55 A and passed on to desk No. 3. This desk was in charge of the Commanding Officer and his assistants. They personally received all valuables for deposit in a large safe kept for this purpose. This was not obligatory.

The clean wounded then passed to the disrobing room. This was in charge of an officer with a suitable enlisted force to assist the patients in undressing. The patients were told to keep all papers in their hands and remove all personal belongings, such as toilet articles, from their grips and clothing, and all grips and clothing, except shoes, were taken from them and sterilized. Later the shoes were sterilized.

The patients then passed to the examining room where there was a sufficient force of medical examiners, whose duty it was to examine for vermin, and for contagious skin and venereal diseases. The examiners also classified in general as to the type of disability.

From here the patients went in two lines to the bathroom. The vermin-infested patients passed into a special bathroom for disinfection, and the clean patients passed to the large general bathroom. These baths, it is needless to say, were showers. From the bathrooms the patients were conducted to the dressing room where they were given a pair of pajamas, a pair of slippers and a bathrobe each.

The patients then passed into the hall where the chief of the laboratory service was ready and with his personnel made throat culture of each patient, after which the patients went to the various wards.

In this way it was a simple matter to admit the patients rapidly, without confusion, without loss of time and without retracing the steps.

The litter patients were admitted in the same manner, except that the movement of the patients was expedited. Nothing was done on the receiving floor except examinations, assignment

to wards and the taking of throat cultures. These patients were then conducted to the wards by suitable escorts.

The hospital had a total bed capacity of 2,677. Most of the patients were classified as medical cases. The object of the hospital, as previously stated, was the rapid admission, classification and evacuation of each patient in order that available beds would always be at the disposal of the Surgeon of the Port. This was possible owing to the fact that the work of admitting and evacuating the patients had been simplified as much as it was possible.

After I reported for duty I was assigned to the eleventh floor, which had been set aside for the seriously sick. On Christmas Eve our second convoy of patients arrived. It consisted approximately of 800 patients. These were practically all ambulatory cases: patients who had had the "flu" and various acute contagious diseases overseas, had recovered from their illnesses and came over as casuals. All sorts of medical cases were seen. Although most of the cases were ambulatory there was a great variety of interesting cases. As an example might be cited a case of malignant endocarditis with perforation of both mitral and aortic valves.¹ In one of the cases of tuberculous meningitis we were able to demonstrate the tubercle bacillus in the spinal cord.²

About the middle of January patients began to arrive who were suffering from pneumonia, and I was assigned to take charge of all pneumonia cases. These were patients who had contracted the "flu" either just before or shortly after embarking for this side. During my service in the medical wards I treated 100 pneumonia patients. When these patients began to arrive, it seemed wise to make arrangements to divide the wards on the eleventh floor and to establish a pneumonia ward. This was done by Major J. E. Conboy. We obtained very good co-operation from the laboratory as well as from the x-ray department. During the time I was in charge of the pneumonia ward I treated 100 patients. Of this number, 80 recovered and 20 died, making a mortality of 20 per cent.

1. Conboy, John E., and Kretschmer, Herman L.: Malignant Endocarditis with Perforation of both Mitral and Aortic Valves. Report of a Case. Jour. A. M. A., 1920, Jan. 17, Vol. 74, No. 3, p. 154.

2. Kretschmer, Herman L.: Demonstration of Tubercle Bacilli in the Spinal Cord of a Patient Suffering from Tuberculous Meningitis. Jour. A. M. A., 1920, Jan. 24, Vol. 74, No. 4, p. 247.

When these patients first began to arrive it was thought a matter of interest to obtain a history relative to whether or not the patient had been gassed. It was our opinion that perhaps the patients who had been gassed might be more susceptible to pneumonia than those who had not been. Of these 100 patients there were only 10 who gave a history of having been gassed. Of these 10, some said they had had just a touch of gas; hence we did not feel that previous gassing played much of a role in our cases.

The sputum was carefully typed. Some of the patients were admitted to the hospital before the laboratory was ready to do this, so that the total number of patients in which the sputum was typed was 80. Positive cultures were obtained in 67; negative cultures in 12; no diagnosis in 1. The types of organisms found were as follows:

Pneumococcus—Type I	18
Type II	12
Type III	1
Type IV	22

Blood cultures were made in 69 patients. Positive cultures were obtained in 16; negative cultures in 54. The types of organism isolated were as follows:

Pneumococcus—Type I	6
Type II	4
Type III	0
Type IV	0
Streptococcus	1
Hemolytic streptococcus	2
Gram negative bacillus.....	1
Positive; type not stated.....	1
The following complications were met with:	

	Cases
Empyema	4
Empyema and pericarditis.....	1
Purulent pericarditis	1
Pulmonary tuberculosis associated with broncho-pneumonia following the "flu".....	2
Pleural effusion	7
Tuberculous pleural effusion.....	1
Myocarditis	1
Jaundice	2

RELATION OF POSITIVE CULTURES TO MORTALITY

Organisms Found—	No.		
	Cases	Recovered	Died
Pneumococcus—Type I	6	4	2
Pneumococcus—Type II	4	2	2
Pneumococcus—Type III	0	..	..
Pneumococcus—Type IV	0	..	..
Streptococcus	1	0	1
Hemolytic strepto	2	0	2
Gram neg. bacillus.....	1	0	1
Positive organism not stated.....	1	0	1
Total	15	6	9

The striking fact about this small epidemic was that so few patients developed empyema. We were fortunate in having good co-operation from the x-ray department, so that our patients

were studied very carefully by repeated roentgenograms of the chest.

With reference to the food, the following may be said. There was a general kitchen which supplied the patients, nurses, and enlisted men throughout the house with the exception of the seriously sick cases on the eleventh floor, where a special diet kitchen was installed, such as one would have recourse to in any civilian hospital. When the hospital was full there were 2,677 patients to feed, about 200 nurses and 700 enlisted men, making a total of 3,577. This multiplied by three made 10,731 meals that had to be served daily. This impressed me as being a big job all by itself. The kitchen, however, was most elaborately equipped and one that seemed to run very well, and one that I am told could very easily have taken care of 40,000 meals a day. The kitchen and its equipment invoiced at about \$80,000.00, and consisted of 79 or 80,000 pieces of equipment.

I am under the impression that this hospital was scheduled to open the middle of January, but instead it opened the middle of December and at that time the hospital was in shape to take care of the patients.

ENDOCRINE MAL-FUNCTION AND EPILEPSY. A SYNDROME

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MT. VERNON, ILL.

That a functional relationship exists between the glands of internal secretion seems confirmed by numerous clinical observations. It is true that not a great deal of definite data may be had concerning this relationship or "balance", as it has come to be known. Certain writers have, in fact, denied that any evidence exists to prove a selective relationship between the various endocrine glands.¹

Heretofore we have looked upon those abnormal conditions due to endocrine disease as being largely due to individual gland involvement, and depending upon single gland pathology for the various stages of the disease manifested. That new views are being adopted by discriminating observers is shown by the following quotation from Timme:² "From observation and clinical examination of many patients throughout the past six years at the Neurological Institute of New York City I have come

to the conclusion that the so-called types of endocrinopathies, such as status thymolymphaticus, gigantism, infantilism, acromegaly, and a host of unnamed others, are not static states, as one would be led to suppose from descriptions in the literature, but are simply cross sections taken at intervals in a dynamic, progressive, and wide-spread disturbance of the internal glandular system."

That there may exist disturbances or "upsets" in the interglandular harmony capable of producing nervous and psychic states, as well as physical ones, is a logical hypothesis. The history of the following case, which has been under observation for five years, when analysed and each stage viewed as a cross section of a progressive malady, seems highly significant of pluriglandular depression.

Case 1. Miss —, first born in a family of five children, was an 8 months' child, the prematurity being apparently due to a severe fright sustained by the mother at this time. During childhood she suffered from a severe attack of whooping cough. When 7 years old she had chorea, and again when she was 13.

She began to menstruate at 14 years of age. The flow was always rather scant and was accompanied by cramps. As compared with other children in the family she was of frail physique. She was chronically constipated, and had an acne which failed to respond to various forms of treatment.

When she was 17 years old she had a general convulsion, with the characteristics of a grand mal seizure. No cause was known for the convulsion, and as it was not repeated it was temporarily forgotten.

As a young girl her temperament was probably an average esthetic normal. She became an expert musician, and was studiously inclined. As she grew older temperamental changes were noticed; irritability, with a certain amount of selfishness and egotism, and exclusiveness in a social way was marked.

In 1916 when she was 26 years of age, there occurred a second convulsion. She was at this time studying in a musical conservatory, and working very hard. For the past five or six years she had noted a gradual diminution in the menstrual flow. She was still constipated, and the acne uncured. She gave up her studies entirely and returned home, believing the second convulsion to be due to overwork. With the approach of the next menstrual period she had another seizure, and at varying intervals thereafter she had convulsions. There was no definite time of occurrence, except that as a general thing

1. Marine, David: The Thyroid Gland in Relation to Gynecology and Obstetrics. Surg., Gynec., and Obstet., Sept., 1917.

2. Timme, Dr. Walter: A New Pluriglandular Compensation Syndrome. Med. Clinics of N. A., Jan., 1919.

a convulsion was to be expected near the menstrual period.

The thyroid now became enlarged, both lobes slightly and the isthmus markedly so. There were no signs of hyper-thyroidism, although she was nervous in a general way, and depressed. She had a bad color, was anemic and irritable.

At this time she entered a university hospital for treatment, and was under the care of a neurologist and a gynecologist. A diagnosis of idiopathic epilepsy was made, and bromide and a limited diet prescribed. She was also curetted. But little improvement followed this treatment; the bromide caused the attacks to become less frequent, but brought about an increase in the severity of the acne and constipation. The effects of the curettement were limited to a slight improvement in her dysmenorrhea, but the ovarian depression incident to the removal of uterine mucous membrane resulted in further diminishing the amount of the menses. Attacks continued to occur, and the patient felt herself to be a burden to her family, and regarded herself as incurable. Her activities were limited because of her fear of being seized with a convulsion in public; her self-confidence and esteem were much depressed. As a means of restoring normal menstruation she took for several months, under my direction, extract of corpus luteum, but without apparent effect at the time.

Having given up bromide because of its effect on her acne, and the convulsions recurring, her family gave her a proprietary remedy, and for a few months she was free from attacks. She then rather suddenly became mentally deranged, with hallucinations, periods of excitement, with attempts at self destruction, alternating with periods of depression with grimacing and posturing. She was sleepless, and large doses of hypnotics were required. She could hardly be induced to take nourishment, and rapidly became physically reduced, and was finally placed in a state hospital, where for six months her mind was a blank to all normal perceptions. Physical improvement slowly took place, and after half a year of institutional care, during which time she took no bromide or other medical treatment for the epilepsy, a rapid mental clearing took place. She began to gain in weight, took on a good color, the constipation was soon relieved, the acne cleared up, the thyroid enlargement disappeared, she was able to write intelligently to her family, and was soon sent home on probation. She had no further convulsions, and had had none since some time before the development of the mental disturbance. She showed no signs of humiliation because of her confinement in the asylum, as her family had feared, but instead seemed to regard the matter as a closed incident, and was glad to be home again. She was more normal in a physical and mental way than at any time for a few years, with one exception, and this was that she had a complete amenorrhea which had persisted since the development of the mental disturbance. To all appearances she had undergone a premature menopause.

Later on a scant menstruation occurred, and there-

after at fairly regular intervals. The flow was always scant, and after a few months she felt depressed and irritable and had headache. I had previously urged that she take a pluriglandular treatment, as I felt the case was one of pluriglandular depression, but after her return home she regarded herself as well and declined treatment. Menstruation had reappeared about a year after her return, and had continued scantily at monthly intervals for six months, when upon a day when a period was expected no flow occurred. During that night she was awakened with a sensation of an oncoming convulsion, which immediately took place. This was a typical grand mal convulsion, and lasted about two minutes. No menstruation took place that month.

This circumstance impressed the patient with the importance of her condition, and she realized that she would probably repeat her previous experiences unless some specific benefit could be obtained from treatment. Accordingly she was placed upon a combined treatment of ovarian, posterior pituitary and thyroid extracts. No bromide was given. Menstruation appeared on schedule time the following month, and each month thereafter until the present, a duration of seven months.* She has had no further convulsions, is free from constipation and acne, feels well, and reports as follows: "I have been faithful to the glandular treatment, and this week had the most nearly normal menstruation in *months and months*. But it is yet a trifle scant. However, I had neither pain nor headache, nor felt so depressed as I often do. I begin to have hopes of being a real person." She has subsequently reported that the flow is now well established and even profuse.

An analysis of this case reveals several factors which immediately attract notice. These will be briefly discussed from the standpoint of endocrine mal-function, since this is of such outstanding significance that it cannot be ignored. As a basis of discussion I wish to refer to Bandler's³ classification of the endocrines with respect to their relation to the female generative organs. He divides them into two groups, placing in one group those which have a supporting or stimulating action, and in the other group those which have an inhibiting or depressing action:

Stimulators: Ovary, thyroid, adrenals, posterior pituitary.

Depressors: Thymus, mammary, anterior pituitary, placenta.

In this arrangement we have a suggestion of the balance previously mentioned. A detailed

*Note: Ten months have now elapsed. Flow is normal and patient free from convulsions.

3. Bandler, S. W.: Sterility in Women, with Especial Reference to Endocrine Treatment of the Same. Med. Clinics of N. A., Vol. ii, No. 4.

discussion of individual gland function cannot be undertaken because of space limitation, but a short resume will be given to suggest the application of this arrangement to the case just described. Bearing in mind that this arrangement is for the purpose of first, showing the relationship of these glands to the female generative organs, and second, as showing to some extent their synergistic as well as their opposed actions in relation to each other, the following essentials require but mentioning:

Ovary. The influence of this structure is noted at puberty, during menstruation, in pregnancy and at the menopause. Its action upon the menstrual function is a direct one, as shown by the effect of removal of the ovaries. Varying degrees of hyperfunction result in menorrhagia, the so-called constitutional dysmenorrhea of young girls, and other evidences of excessive uterine function. Ovarian hypofunction results in relative or absolute amenorrhea and systemic states dependent upon this. Ovarian activity causes stimulation of the endometrium, and the ovary is in turn stimulated or depressed by disturbances of the endometrium. Too free removal of the endometrium depresses the ovary, and is productive of amenorrhea, as noted following the curettement in the case described.

Thyroid. Aside from the exophthalmic and cystic forms of goiter, thyroid enlargements are often noted at puberty, in pregnancy, and in certain states dependent on ovarian depression. Simple goiter in young girls is an expression of hypothyroidism incident to the increased demands of the system at this time. It is preventable, as shown by routine administration of potassium iodide to public school girls. Attention is called to the thyroid enlargement in the case described, which I regarded as compensatory in nature. Such enlargements have come to be known as "work hypertrophies." The disappearance of this goiter when her glandular balance was restored, and the effect of thyroid medication later confirm this view.

Adrenals. In this paper attention will be directed merely to the vasomotor disturbances which so many women have, and the feeling of depression and weakness often complained of.

Posterior Pituitary. Bandler states that it is the posterior lobe which furnishes the element which has a trophic and stimulating effect upon the genitalia. Pituitrin, as used in obstetrics,

exemplifies the stimulating action. Goetsch⁴, summarizing a discussion of the relationship of the pituitary to the sex functions in the female, says, "Deficiency of the pituitary secretion in the individual is followed by underdevelopment and genital aplasia in the young and by sexual inactivity and retrogression in the adult." It would be expected therefore, that exhausting diseases in the young may be followed by impaired pituitary function, which would in turn cause a relative impairment of ovarian function, and this supposition seems borne out by the scanty menses and progressive amenorrhea which this patient had from the onset of puberty.

Thymus. The thymus is active during childhood, and has retrogressed by the time puberty comes on. It has an antagonistic effect upon the thyroid and ovarian functions. Bandler states that thymus extract is of value in the various forms of menorrhagia and metrorrhagia due to overactivity of the ovaries, and possibly acts well when the posterior pituitary is over-functioning.

Mammary. The influence of the mammary is most evident during pregnancy and lactation, at which time it appears to exercise in conjunction with the placenta an inhibiting action upon ovarian activity and menstruation. Bandler states that it acts best when combined with anterior pituitary extract, and is useful in menorrhagia, metrorrhagia and fibrosis uteri.

Placenta. In general the same statements apply here as in the case of the mammary.

Anterior Pituitary. This portion of the pituitary gland has a marked influence upon growth, exercising a general tonic effect. Upon the uterus its effect is opposite to that of the posterior lobe, and while of value in neutralizing excessive ovarian function in cases of menorrhagia, should be avoided in cases of amenorrhea. Disease of the anterior lobe causes acromegaly in adults, and its interglandular relationship is shown by the varying disturbances produced in the young. "Thus in gigantism we find skeletal overgrowth combined with genital hypoplasia and imperfectly acquired secondary sexual characteristics and in acromegaly we similarly have the well-known bony overgrowth and retrogressive sexual changes producing amenorrhea and sterility, even though the sexual functions may have

⁴ Goetsch, E.: The Relation of the Pituitary Gland to the Female Generative Organs. Surg., Gynec., and Obstet., Sept., 1917, p. 243.

been previously quite normal" (4, p. 235-6). Space does not permit mention of recent interesting literature upon certain pituitary syndromes.

Discussion. The information obtained of the first stage (or cross section) of the case relates two definite causal factors: 1st., prematurity of birth, with its depressing effect upon the organism. In other words, the patient got a poor start. 2nd. Severe infectious or constitutional diseases in childhood—the pertussis from which the child nearly died, and two attacks of chorea with their specific damaging effect upon the nervous and glandular systems. We note that the patient was not a robust child, and this we may regard as evidence of anterior pituitary depression, since no matter what may have been the general causes of lack of robustness we must ultimately consider the specific involvement of such complex functions as preside over physical changes.

With the establishment of menstruation another evidence of imperfect functioning is seen. The menses were always scanty, and there was dysmenorrhea. This would indicate that ovarian activity was below par, with probably an associated hypothyroid function. Reasoning from the standpoint of later knowledge of posterior pituitary function we might suppose that this function was also involved in a general depression of the entire group of stimulators, for it is with this group that we have mostly to deal in this case. In dealing with such cases one must take into consideration the minor as well as the major types of glandular disturbances. Everyone knows the symptoms of the major types of endocrine perversion. Bandler aptly remarks, "Undoubtedly the greatest difficulty in the proper interpretation of interglandular upset depends upon the fact that so many of the cases are of minor degree—of a degree less than is typical of the well-exemplified cases."³

We come now to another phase in a progressive condition. This started with the onset of what may be called menstrual insufficiency, which I regard as a contributing factor in the production of the so-called epilepsy. Why the human female menstruates no one seems to know. The function must have a purpose in the physical economy, and when it is depressed the body doubtless suffers in some way. Possibly if the flow (or its stimulus) is insufficient the inter-

glandular harmony is upset with the release of excess activity in other glands; there may be formed some toxic metabolic products, or there may be some such product which fails to be eliminated by an insufficient flow. Witness the many obscure phenomena presented by many patients—spells of depression or excitation, headaches, nervousness, etc., as well as the more marked evidences of upset, such as the nausea of early pregnancy, the psychoses following parturition and the flushes of the climacterium.

The significance of all this lies in the predilection of the convulsions to occur at the peak of the inter-menstrual period, if I may so designate it, a time when a failure to eliminate precipitated a crisis marked by convulsion. This significance is dramatically illustrated by the onset of a convulsion on the day a period was missed, 18 months after she had been free from attacks.

Going back just a little in the history of this phase, we note that this patient had a relative amenorrhea until she was 17 years old, when the first convulsion occurred. The amenorrhea slowly progressed, and nine years later she had another convulsion and the definite establishment of epilepsy which resisted ordinary treatment, and coincident with the complete suppression of menstruation terminated in a psychoneurosis.

We now come to a new phase, and take up a consideration of the outcome of the case. As noted in the history, the patient rather suddenly cleared up mentally after a few months, with a return of better health than she had had for several years. Why did this remarkable change take place? I find but one logical explanation, if it will suffice. Under my direction the patient had taken for several months previous to the suppression of the menses and the development of the psychic condition, an extract of corpus luteum. This substance was at that time being regarded as the active principle of the ovary, and it was administered to test the specificity of the substance and the theory of ovarian hypofunction, which I regarded as indirectly responsible for the convulsions. There was no apparent benefit from this medication at the time. I now believe that this one substance was not sufficient, and that a polyglandular treatment would have been better; I also believe that there was a delayed or cumulative effect from the corpus

luteum, which finally restored glandular harmony with a clearing up of the derangement and establishment of better body functions and general health. Specifically, this view seems confirmed by the disappearance of the thyroid enlargement (one of the late physical developments), relief from constipation and acne, and the final return of menstruation.

Following this we note a period of apparent health, the only abnormality being scanty menstruation. For a year and a half no treatment was taken, when symptoms of glandular failure again appeared. These consisted of feelings of depression, irritability and headache at the time of the menses. The climax of this untreated period was a missed menstruation and the appearance of a convulsion. Glandular treatment with ovarian, thyroid and posterior pituitary extracts at once restored the balance, resulting in menstruation at the next expected period, no convulsion, and relief from most of the trying symptoms. Continued treatment has resulted during the past seven* months in complete freedom from attacks, normal menstruation, good general health and increased sense of well-being.

FUNCTIONAL EPILEPSY

Epilepsy is largely an unknown quality, to slightly change the phrase. That it takes origin in diverse conditions seems true. We here exclude those cases due to head injuries, birth apoplexies in which the convulsions appear later with the growth and expansion of the brain, and those in which no cause whatever may be found. From a standpoint of therapeutics epilepsy is a poor cognomen for the condition. The more we learn of the causes of the condition the less we think in terms of name, but rather of type. It is a convulsive state, and who has not seen convulsions from diverse causes? We might speak of functional epilepsy; such terms call upon our analytical acumen for diligence and effort. The case described is seemingly a functional epilepsy. I have recently seen another. This woman never had a convulsion until she neared the menopause, when she one day experienced a sensation as though mentally grasping after something—a sort of psychic equivalent. After the menopause she had nocturnal convulsions of which she was not aware. She sometimes knows when one is due, because

she suddenly experiences a feeling of dejection. Bromide treatment does little good. She has always shown a tendency to ovarian hypofunction. She menstruated first at 15, was unable to nurse some of her children, and passed the menopause abruptly. She is now getting thin, and she shows a marked secondary anemia, with a hemoglobin of 67, leucopenia, and no increase in eosinophiles. Her skin is dry and seems thick—evidently due to hypothyroidism. These signs of general hypofunction and the onset of her convulsions coincident with cessation of menstruation seem significant of these factors being responsible indirectly for her epilepsy.

In the *Journal A. M. A.* of Dec. 20, 1919, the following abstract from the *Revue Neurologique* of Paris, appears:

Perrin and Richard describe two cases in which pluriglandular endocrine disturbance, ovarian deficiency predominating, seemed responsible for the development of tardy epilepsy. The patients were an idiot of 38 and a woman of 20, and ovarian treatment displayed considerable efficacy. Different gland extracts might be tried; the effect should never be definitely estimated in epilepsy until after persevering use for several months, with adequate doses. In one of their cases they gave 10 cg. of thyroid extract and 40 cg. of ovarian extract for a month, continuing the bromide as usual. When three months passed without an attack, the amounts were doubled and there was only one seizure afterward. The attacks in this case had usually coincided with the menstrual periods.

Bisgaard and Norvig,⁵ after examining several thousand bloods and urines from epileptics, found that there was a remarkable increase in the ammonia content in the blood about three hours before convulsions or psychic equivalents, and this could be foretold by noting the increasing ammonia content in the urine. They regard the epileptic seizure as a kind of anaphylactic shock or poisoning with albumin waste products. They profess to see an analogy between tetany and epilepsy. They believe the treatment, instead of consisting of sedatives which merely reduce reflex action, may well be directed to the endocrine disturbances presumably at fault.

The intense toxemia, or glandular upset in the first case described, with recovery of glandular harmony, shows the variations which may occur in these disturbances. Bandler, in the article

5. A. Bisgaard and J. Norvig: Regulation of Neutrality in Epilepsy. *Hospitaltidende*, Copenhagen, Jan. 28, 1920, 63, No. 4.

*Now ten months.

already quoted, puts it very nicely in these words:

We must distinguish between the somatic and the mental or psychic side of pathologic states due to endocrine relation. . . . I have seen in so many of my patients attacks of mental depression and blues, so many cases of excitement and states of exhalation of minor degree . . . that long ago I came to the conclusion that we must grant variations in intensity in mental diseases. If we have the forms known as manic-depressive insanity, dementia praecox, melancholia, etc., why may we not have minor types of the same conditions confronting us in our gynecologic obstetric work? . . . All these variations . . . have convinced me that mental diseases of extreme type may have the same relation to the milder forms and to the so-called neuroses and psychoses, and to the so-called neurasthenia and hysteria, that the major forms of exophthalmic goiter and myxedema, gigantism and dwarfism, etc., bear to minor variations noted every day.

VACCINES IN TOXIC CONDITIONS

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DETROIT, MICH.

In a serious pelvic infection in a young woman where an operation had been decided upon, the writer suggested the use of vaccines as a means of more readily controlling the infection after the operation. The doctor agreed that vaccines were efficient agents in the treatment of this kind of cases, but that they should not be applied in the early acute stage, because the patient is "too toxic." That the patient is already supplied with too much antigen, "so why give a vaccine?" Then he pointed out that the appropriate time to use the vaccine would be after the operation when the acute symptoms had subsided; when the vaccines would stimulate antibody production and hasten recovery.

We would venture the assertion that this expresses the viewpoint of a large majority of physicians at the present time, although this conception is based purely on theoretical grounds. The mere fact that a patient shows marked toxic symptoms is no proof that the toxins responsible for this condition possess antigenic influences on the prevailing infection. Germ-produced toxins possess destructive properties which are not necessarily antigenic in character. It does not necessarily follow that because a patient presents toxic symptoms, antigenic activities are also present. In fact, the reverse is often true. Extremely toxic cases usually recover slowly or die. Under such conditions antibody production is either retarded or inhibited.

From a closer study of these infective processes we find that this toxic condition is due to the rapid multiplication of the infecting organisms with the incidental production of ferments which the germs secrete to digest the food on which they live. These toxic ferments have a distinct destructive tendency on tissue cells, without any marked influence in stimulating tissue cells for antibody production. The crying need, however, in these extensive acute infections is rapid antibody formation to neutralize these germ-produced poisons and to eliminate the germs. The presence of extensive toxic symptoms shows that this is not being adequately accomplished. The reason doctors hesitate to give vaccines in these conditions is because they fear that a dose of vaccine will add sufficient toxic material to seriously tax the recuperative powers in overcoming the load under which the system is already laboring.

This, however, is not in accord with the facts of the situation. It must be remembered that bacterial vaccines are given in infinitely small doses—.004 of a grain of killed germs being the usual initial dose. These killed germs cannot secrete toxic ferments, consequently the toxic character of a dose of vaccine is limited to the small amount of toxic material contained in the vaccine. On the other hand, it is safe to say that more toxic material develops during the course of every hour from the activities of the infecting organisms than is contained in a dose of vaccine. Furthermore, the vaccine possesses marked antigenic properties and will soon stimulate tissue cells for antibody production to eliminate the infection. For these various reasons it is found that vaccines when given in cases presenting extensive toxic symptoms do not produce negative depressing toxic effects, but on the contrary, it is found that toxic symptoms subside after their administration.

From this it is clear that even in extreme toxic conditions, in acute infections, bacterial vaccines may be employed without the least fear of doing any harm. In fact we find that in extreme acute infections, bacterial vaccines not only give the best clinical results but they may also be given in larger doses at shorter intervals with less reactions than in minor or chronic infections and the earlier they are given, the better the results.

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HEADACHES: WITH SPECIAL REFERENCE TO THOSE OF NASAL ORIGIN*

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One of the great tendencies in the practice of medicine is to treat symptoms, and not directly the diseases of which the symptoms are merely an index. Thus the pain of so-called rheumatism was formerly alleviated by the use of salicylates and other sedatives; now we know that at least some of these cases are due to focal infections arising from teeth, tonsils, nasal accessory sinuses, etc. Again, asthmatic dyspnea is often treated empirically with certain drugs, when we know that renal, cardiac or nasal conditions may lie at the source of asthma, or that it is an expression of an anaphylaxis due to entrance into the system of certain foreign proteins. But no affection is perhaps more variable in its etiology, more annoying to the patient, and more often treated symptomatically, that is, with sedatives, than headache or cephalalgia. In some form or other, and in varying degree, a great majority of all people seem to suffer occasionally from headache. At least, in my experience it has been quite unusual to find a patient who has not at some time or another had some pains in his head.

The etiology of any symptom first engages our attention. The French say "*cherchez la femme*," in the attempt to unravel many of the mysteries in human relations. But we in medicine must seek the physical sources of the ills "*which flesh is heir to*." Headaches as well as pains in other parts of the body, may be caused by abnormal conditions of many different tissues and structures. Affections of the blood, such as anemia, pelvic disturbances, intestinal derangement, autointoxication, renal or cardiac disease, high blood pressure, neurasthenia, or syphilis, may produce severe cephalalgia. In the head itself we may have trifacial neuralgia, dental root infections, migraine, or pains in the muscles attached to the region of the occiput and those in the upper portion of the neck posteriorly and laterally (sterno-mastoid and trapezius). Important to remember are the pains due to diseases of the ear and to abscesses or tumors of the brain. Last, and from our standpoint

most important, are the headaches arising from the nose—pressure effects, vacuum effects and accessory sinus infections.

It is neither intended nor possible to enter upon a detailed discussion of all these forms of headache. The important characteristics of some will be mentioned, with most emphasis upon those pains due to some involvement of the nose. One of the pitfalls into which many specialists stumble, is to assign to the group of organs they are accustomed to treat any symptoms which the patient presents. How many patients with gastric crises have not had the stomach tube passed and lavage carried out, when a tabes was the actual condition present and not a gastritis. Likewise, it behooves the rhinologist to remember that all headaches do not arise from intranasal conditions, but may be due to lues, high arterial tension, etc. In a word, a knowledge of the co-relation of the various parts of the body is essential. In a paper which I read before this Society a few years ago (April, 1918) on "Proper Diagnosis as a Guide to Prognosis and Operative Treatment of Impaired Hearing," emphasis was laid upon the desirability and necessity of accurate functional testing before instituting operative or other therapy.

The conscious sensation known as headache must, it seems, be the result of some affection or irritation of that great sensory fifth cranial nerve or trigeminus. This irritation may be a direct one by pressure, inflammation, etc.; by reflection from other cranial nerves via anastomoses, or by direct action of toxic substances brought to the nerve from other parts of the body by way of the blood stream. Thus we may have, as before mentioned, headaches from cardiac, renal, intestinal and pelvic lesions, or from high blood pressure or anemia. In these conditions there is no specific localization and no distinct prodiodicity. The pains in syphilis are, as a rule, more marked at night, but it is said that the headache of brain tumor and uremia is also often worse at that time. With reference to the luetic headaches let me say, that I recently saw a case in which the pains were of the nocturnal type; no nasal or other lesion could be detected to account for them. Suspecting syphilis, both a blood and spinal fluid Wassermann were made, found negative, and yet the pains were entirely relieved by the use of

*Read before the Chicago Medical Society, April 7, 1920.

iodides; probably this was an instance of the late tertiary form.

Another headache is the neurasthenic form in which there is not really so much an actual pain, as a feeling of pressure or of constriction about the head. As a rule, there is in these cases some mental or emotional factor, but this is often difficult to elicit. The patient may state that the pain has been present daily for many months or even years, yet it does not disturb his sleep. If insomnia is present, it is usually due to some other cause.

Migraine is one of the most distressing forms of headaches. It is probably a neurosis, the etiology of which is not definitely known, but heredity is an important factor in this condition. The pain is a severe one which may be unilateral or bilateral, (despite the name of hemicrania so often assigned to it); is not definitely localized, but is most frequently frontal or temporal, though it may be parietal or occipital. Ocular symptoms (scintillating or obscuring scotoma), sometimes precede the attack, and gastric signs (nausea or vomiting), may accompany it.

Trifacial neuralgia is characterized by the occurrence of intense, sharp, stabbing pains which are short in duration (usually for ten to thirty seconds), and which are usually excited or aggravated by washing the face, brushing the teeth, eating, talking, etc.

Headache, due to aural infection, is usually referred either to the ear itself, to the mastoid process or to the temporal region. In these cases, of course, we have the various signs and symptoms attending an acute inflammatory process in the middle or external ear.

In pain due to brain abscess we may have the history of a preceding ear infection; but in both an abscess or brain tumor the pains, as well as the focal signs, will depend on the localization of the lesion. If the silent areas, such as the frontal lobes are involved, often no direct symptoms such as pain may be present.

Many headaches are due to dental involvement, either caries, or impaction, especially of the last molars. We have seen cases in which pains radiating to the eye, vertex or occiput, have been entirely relieved by extraction of an impacted third molar, after patients have been suspected of accessory sinus disease, and have

been treated without avail by means of irrigations, etc.

Indurative or rheumatic headache is characterized by pains usually occipital or suboccipital, but at times in one or both temporal regions. It is apt to change with the weather, is subacute or chronic in its duration, is accompanied by tenderness on pressure over the part affected such as the insertion of the occipital-frontalis and trapezius muscles, or the transverse process of the fourth cervical vertebra. Movements of the head and neck are usually painful. To relieve this condition elimination of infective foci, if present, is indicated, together with massage and the application of heat.

A very distressing form of headache is that due to irritation of Meckel's or sphenopalatine ganglion. This produces a very severe pain radiating from the root of the nose, in or about the eyes, over the frontal region, back to the parietal bone and then posteriorly to the ear, mastoid process down into the pharynx, tonsils, neck, arms and sometimes the fingers. Not all areas are involved in every patient but usually one or several of these is affected. As a rule, the point of greatest pain is about six mm. behind the mastoid. Injection of 2 per cent. carbolic acid in alcohol into the region of the ganglion affords considerable relief in many cases. There is, however, a tendency to recurrence, so that injections may have to be repeated. These are not entirely devoid of danger, for some cases of severe hemorrhage, loss of corneal sensation followed by ulceration, etc. have been reported.

Headaches are often due to eyestrain, errors of refraction or muscle imbalance. Here the pains often present in or about the eyes or in the temporal region, are increased by the use of the eyes, and are relieved by proper glasses and muscular exercises.

Coming to the headaches arising from nasal conditions we find two great classes: the suppurative and the non-suppurative.

The suppurative form constitutes probably by far the majority of the cases, and consists of the acute and chronic accessory sinusitis. Only the most fundamental facts can be here enumerated as the subject of infection of the nasal sinuses is so extensive that a whole evening's discussion could not begin to cover it properly. In making a diagnosis of sinusitis, transillumination of the maxillary and frontal sinuses is often of consid-

erable aid, but has little value with reference to the other accessory cavities. Better than this measure is the use of the x-ray picture, but most important is the history of the case, and the finding of pus on examination with or without the use of suction after shrinking the mucosa. Pus issuing from the middle meatus comes from one or more cells of the anterior group of sinuses, namely, the frontal, anterior ethmoidal cells or maxillary sinus; pus in the superior meatus or in the sphenoid-ethmoidal recess, arises from one or other of the posterior set of sinuses: posterior ethmoidal cells or the sphenoid sinus.

As Hajek has said: "The most definite thing about the pains in sinusitis is the uncertain localization thereof." There is no characteristic localization of the pain or tenderness in involvement of any particular sinus but generally speaking it is fairly true that with maxillary antrum disease the pain is mainly in the upper teeth, the cheek and floor of the orbit; with frontal sinusitis usually in the forehead; with anterior ethmoiditis between the eyes and in the temporal and parietal regions; and with posterior ethmoiditis or sphenoiditis in the occipital regions. But all manner of variations from this statement may occur, such as occipital pains with frontal sinusitis, vice versa, etc. The sinus pain occurs with considerable periodicity at certain times of the day, and then may after some hours entirely disappear, to recur again the next day, or after several days, weeks or even months. Particularly with frontal sinusitis (and sometimes also with maxillary antrum and other involvements), do we find that a patient awakes feeling well, later in the morning notices pain which increases in severity toward noon or early afternoon, then again subsides, so that by evening there is complete freedom from pain. The individual sleeps well and awakes, as above mentioned, feeling fine, only to repeat the cycle. The cause for this peculiar periodicity has never been explained. It is important to remember that a slight leukocytosis and a moderate rise in temperature often accompany the acute or chronic sinusitis. There is usually tenderness on pressure or percussion, but this is not definitely localized in all cases for the particular sinus involved.

This paper does not deal primarily with treatment, so that we will only mention the

fundamental points in the therapy. In the acute sinusitis rest, application of astringents to the nasal meati, suction, irrigation, application of heat, and occasional use of sedatives if pain is very severe, are the measures usually employed. In the chronic forms, cleansing irrigation, suction and operative procedures are indicated, the latter to be as conservative of tissues as possible, consistent with the establishment of proper and sufficient drainage.

The non-suppurative nasal conditions producing headaches comprise two groups, the first of which is the so-called hyperplastic form, especially the ethmoiditis and sphenoiditis. Here there is a thickening of the mucosal lining of the sinuses involved, or even a polypoidal degeneration thereof. The headaches are those described under the suppurative form, but there is, of course, absence of pus, leukocytosis or fever.

Last but perhaps not least, there are the headaches caused by what I term mechanical agencies. Some authors are inclined to scout the idea that these conditions are etiological factors even though they have been long recognized by many others. A goodly number of cases have, especially in the last few years, come to my notice in which either pressure of the middle turbinates against the septum, or a blocking of the middle meatus by the middle turbinate has caused severe headaches arising from no other source. When the entrance to the infundibulum, namely, the narrow hiatus semilunaris, which is bounded anteriorly by the uncinate process and posteriorly by the bullaethmoidalis, is obstructed either by a swelling of the mucosa covering these structures, or by contact of a large or edematous middle turbinate, rarefaction of the air in the frontal sinus occurs, and the so-called "vacuum" headache often makes its appearance. The pain is usually felt in the region of the malar bone, eye and forehead of the affected side, and is made worse by the use of the eyes, although the latter show no abnormality. Ewing years ago called attention to exquisite tenderness caused by even moderate pressure against the upper inner wall of the orbit, namely the orbital plate of the frontal bone, in the region of the attachment of the pulley of the superior oblique muscle. This localized tenderness is considered practically pathognomonic of vacuum headache. These

cases are usually quickly relieved by the use of astringents such as cocaine or adrenalin applied to the middle meatus, by removal of the anterior tip of the middle turbinate in extreme cases, or as I have done with very gratifying results, by merely infracting the turbinate body and pressing it away from the lateral nasal wall.

Directly opposite in its genesis is the "pressure" headache caused by undue contact of a middle turbinate against the tuberculum septi, that thick portion of the nasal septum at the junction of its upper and middle third. The pains are usually very distressing and are referred to the root of the nose, the eye or the supraorbital region. Suppurative or other inflammatory conditions in the accessory sinuses are absent in the typical pressure cases. Complete relief is often obtained by shrinking the mucosa of the septum and the turbinate in contact with it, by means of cocaine or adrenalin. Where this fails, a chemical or galvanic cauterization of the tuberculum septi may help, but if not, then amputation of the anterior tip of the middle turbinate, particularly if it is bulbous or polypoidal, may be performed. As stated with reference to the vacuum headaches, so it is also my custom to infract the middle turbinate in those cases of pressure headaches where there is sufficient space in which to press it away from the septum. This little manipulation is done in a few seconds after cocainization without any danger, loss of tissue or deleterious after effects.

To summarize this rambling and cursory survey of some of the numerous forms of headaches, let me say that we must bear in mind their tremendous variation in etiology, pathology and symptomatology. Functional, organic or mechanical factors must be considered, for the treatment and relief depend upon an exact determination of the underlying causes. The pain is only a symptom and for its temporary relief sedatives may be used. Some cases are practically incurable with the means now at our command, but a very large percentage of unfortunates may be greatly benefited if we carefully study the case, not only the patient's head, but by cooperation with internists, neurologists, surgeons and radiographers, search for signs and symptoms of disturbed functions in the various parts of the body.

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THE TREATMENT OF GOITER WITH RADIUM*

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There are many kinds of goiter: Congenital, the goiter of adolescence, simple, cystic, colloid, fibroid, malignant, toxic and Graves' disease. The purpose of the present paper is to discuss the toxic and Graves' disease forms only.

It would seem to us that these, plus the malignant and the parenchymatous, are the only varieties where radium would be beneficial, though it may be that experimental work might show it applicable to a few of the other forms.

Of the many theories put forward to explain exophthalmic goiter two still stand up as probable. First, that the trouble is due to a hypersecretion of the gland, which, however, may be and probably is changed in its character. The other, that the secretion of the gland stimulates the sympathetic system which in turn again stimulates the gland and thus a vicious circle is instituted. The major part of the evidence seems to favor the first theory. This much is certain that, regardless of the etiology, certain distinct changes take place in the thyroid gland, the blood and some of the other organs. Many observers have noted an almost universal proliferation of the glandular cells, an increase in the connective tissue, certain groups of lymphoid tissue scattered through the connective tissue and enlargement and multiplication of the blood vessels. The colloid material is scanty and lacks the usual bright stain. There is excessive iodine in the blood. There is a lymphocytosis and decreased polymorphonuclear neutrophiles suggestive of disturbance of the lymph system. This is further evidenced by the presence of an enlarged thymus gland, Melchior stating that, based on his personal experience and 151 papers, the unduly enlarged thymus occurred in about 90 per cent. of the exophthalmic goiters. There is enlargement of the spleen and the lymph glands.

It is the purpose of the normal thyroid gland to formulate an iodine compound, working over

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the iodine into an iodothyro globulin and secreting a colloid material in which the iodine is stored up. Thus the explanation why, in Graves' disease, with lessened colloid secretion there would be so much more iodine in the blood and suggesting decidedly that the trouble is due more to an altered secretion than a superabundance of normal secretion. In other words, the gland secretes a toxic substance which is thrown into the blood stream and causes the well known phenomena.

In undertaking to treat this disease we must consider medical treatment, surgery and ray therapy. As the etiology is unknown, we must attack it symptomatically and with regard to what is known of the pathology. Medical and hygienic treatment have an undoubted place, but should not be persisted in until degenerative changes have taken place in the heart. Crile of Cleveland expresses the opinion that "non-surgical treatment should always be tried. If this has been done without avail, then surgical procedures calculated to break the force of the disease are indicated." There has been a tendency, especially of late years, to rather regard exophthalmic goiter as a surgical disease and we agree with Crile in holding this to be a fallacy.

The results of surgery have not been markedly brilliant and a number of prominent surgeons have expressed the opinion that surgery is unscientific, applied to this disease. The statistics of the Mayo Clinic show a mortality rate of three to four per cent. Kocher shows likewise a similar death rate. V. C. David states that of sixty-five patients operated on 38 per cent. were cured, 40 per cent. benefited. Judd and Pemberton report 121 cases of which 45 per cent. were cured, the rest of them showing some improvement or none at all. The average length of time required to effect a cure by surgery was 17.9 months. We must remember further that these were selected cases a number being refused, the operative risk being considered too great, and that these represent the statistics of the more skilled surgeons and undoubtedly the operative mortality is greater broadcast throughout the country. Kocher also made a habit of ligating vessels and extending the course of treatment over a considerable time before operation and he goes so far as to state that the

operation for Basedow's disease is a most serious one and should not be undertaken by any surgeon who has not previously operated a number of times upon simple goiter.

DaCosta states that it is the Mayos' custom to use x-rays daily for several weeks and then to operate, and it is also his own custom to use the rays preliminary to operation in order to decrease the vascularity of the part, to lessen the amount and diminish the toxic quality of the thyroid secretion.

Schwartz states that the radiotherapeutic treatment of Graves' disease has as high a percentage of success as the surgical method and has none of the danger and pain incident to the latter. He claims 90 per cent. of success for radiotherapy.

In the year 1913 Abbe of New York treated a case of goiter by burying radium tubes in the gland and reported a remarkable success. Many other workers, among them Wicham, Degrais, Dominici, Barcat, Aiken of Toronto, Moriarta of Saratoga Springs, have used radium by external application and reported gratifying results.

When we consider the pathology of the gland and the action of radium it would seem to have a most certain place as a remedial agent. We again bear in mind that there is a proliferation of the glandular cells, deposits of lymph tissue through the thyroid, an enlarged and active thymus and lymph nodes and we see that the disease apparently is not confined merely to the thyroid gland. If surgery be done a diseased portion of the gland is removed and healthy thyroid tissue also taken away. In the portion left behind, certain of the diseased elements remain to often cause further trouble and perhaps to again proliferate when the strain for caring for the body is thrown upon the small remaining amount of normal thyroid tissue, also the thymus gland is not operated upon. We remember that there is a hyperplasia of the arteries which Kocher and the Mayos have endeavored to attack by ligation but this does not distribute the blocking process evenly through the gland.

Radium possesses the ability to kill a diseased cell or a new growth cell when five times the same dose would be necessary to kill a normal adult cell. Also when applied to a blood vessel there is a swelling of the tunica intima followed by an obliterative endarteritis in the smaller vessels

and diminution of the caliber of the larger ones. Now whether the toxic secretion be due to the additional blood supply or to the activity of the new formed cells in the gland, or to both, it will be affected by the radium action. There is this further advantage in using radium, that while diffuse action over the entire gland will eliminate the toxic cells yet the normal healthy tissue will be left untouched provided the dosage can be accurately estimated. Further the blood supply will be reduced much more evenly throughout the gland than can be done by ligation of some of the thyroid arteries.

We also see that radium can be used not only on a case suitable for a surgeon, but on cases where the surgeon is compelled to decline to operate and even on cases where the surgeon has operated and failed. The thymus and lymphatic system can be, and are, rayed, which may explain the success of radium on a case where operative removal of a part of the thyroid has not been successful.

So far the literature shows no death resulting from radiumtherapy and there is a marked advantage over the x-ray in that the dark discoloration of the neck following x-ray treatment has not been observed. Radium can be used upon a nervous patient where the x-ray would be prone to cause excitement and furthermore the radium can be carried to a patient at home if necessary.

The following is a summary of my own work. The technic as given by me in a paper read last Fall before the Radiological Society of North America has not been changed. I have treated to date 47 cases of exophthalmic goiter with radium—the first case being treated in September, 1917. The patients' ages have varied from 16 to 74 years. Two were of the ages of 16 and 19, both with pronounced exophthalmic goiters. Of these cases six had already been operated on with recurrence of symptoms as bad or worse than before. Seventeen cases were declined as operable risks by some of our best surgeons. I have had to ray eight cases the second time as the dosage was inadequate and while the patients improved, the first raying did not give sufficiently satisfactory results. Last October, in a paper read before the Radiological Society of North America, at Chicago, I stated that one patient who had taken up Christian

Science was apparently not benefited, but am pleased to be able to report that recently this patient's sister informed me that the patient, now living in the country, is feeling entirely well and that she now ascribes her recovery to the radium treatment. Two cases with very bad broken compensation of the heart have died since treatment from acute dilatation, one three months after treatment, the other five and one-half months, though in both these cases the pulse had slowed an average of thirty beats and the nervous symptoms were remarkably reduced. In one case out of five there has been no reduction of the goiter; the circumference of the neck has diminished from $\frac{3}{4}$ of an inch to $3\frac{1}{4}$ inches in the others. One woman's goiter did not decrease until thirteen months had elapsed and then suddenly went down $1\frac{5}{8}$ inches in less than two months.

The exophthalmos has been usually the last symptom to disappear and has remained in five of the cases. The pulse beat has been reduced twenty to fifty beats. Nervous symptoms and tremors have disappeared entirely and the patients gained in weight and general well being. There has been symptomatic cure in all of the cases treated with the exceptions noted.

Conclusions: I believe radium should be given a trial in exophthalmic goiter:

First: There is no mortality, no scar or pain, no long hospitalization. Three or four days suffice for the treatment.

Second: Its advantages over the x-ray are—no discoloration of the neck—less time consumed in the treatment—simpler to apply.

Third: The thymus gland can be treated.

Fourth: While surgery in removing proliferating cells leaves others behind, and by ligating still leaves some of the blood supply more or less undisturbed, the selective action of the radium ray, to a much greater degree destroys the harmful cells, while not disturbing the normal cells and also causes a much more symmetrical diminution of the blood supply.

Fifth: It can be used in cases where surgery fears to venture or has failed.

Sixth: Surgery has not been necessary after the radium treatments in a single one of my forty-seven cases, some of them extending back nearly three years.

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INTESTINAL STASIS AND CONSTIPATION: ITS CAUSES AND TREATMENT FROM A NON-SURGICAL STANDPOINT*

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In order to form an intelligent idea of the diseases of the intestinal canal, leading to intestinal stasis, it will be necessary to review briefly the anatomy of these parts.

The structure of the food canal consists mainly of muscle and gland tissue. There are two sets of muscle fibres. The outer set runs lengthwise of the canal; the inner circular muscle structure surrounds the canal throughout its entire length.

Lying between the muscle layers we find the nerve cells and fibres, these cells and fibres are immediately connected with the central nervous system, the brain and spinal cord.

Mucous membrane lines the food canal throughout, and here are located groups of glands that produce the digestive juices.

The nerves and blood vessels which supply the intestines are connected with the spine by means of the mesentery.

Several years ago Dr. Lane of London said, "Chronic intestinal stasis, which I believe to be the prime factor in the production of very many diseased conditions, is of enormous importance, and we cannot spend too much time or thought in unravelling the many problems which it presents."

Dr. Rockey of Oregon says, "Careful clinical observation is convincing me day by day, that the question of intestinal stasis and its consequent morbidity is one of the most important subjects before the medical profession at this time." Accordingly it is well to ask what is the important condition.

I can give you no better definition than that given by Metchinkoff who says, "Intestinal stasis is an abnormal delay in the passage of the intestinal contents through a portion or portions of the gastro-intestinal tract which results in the absorption into the circulation of a greater quantity of poisonous or toxic material than can be treated effectually by the organs whose function it is to convert them into prod-

ucts as innocuous as possible to the tissues of the body."

Strictly speaking then, stasis means vastly more than the mere absence of a daily action of the bowels; any delay in the passage of the contents of this drainage system has a variety of results on the organisms found in the intestines. The multiplication of bacteria is facilitated. They extend beyond the limits of their normal habitat and other strains are developed rapidly.

Our profession is constantly confronted with alimentary toxemia and its baneful effects in one form or another. Not a day passes without these experiences, and as physicians, are we not spending too much time in studying and treating the effect rather than the cause?

For convenience let us briefly outline a few of the main causes of stasis:

Under the subject of foods, the average American takes the lead in overeating, in irregular meals and inharmonious food combinations. As a proof of this statement one only needs to take a glimpse into the cafes and restaurants of our cities and even the small towns. Here we see dissipation along various lines and especially in the matter of food, drink, irregular hours, etc. It is little wonder that the physician is perplexed in dealing with this sort of dissipation.

But herein lies most of our trouble and it is the physician's greatest work to safeguard the individual interests of his patients.

For some time I have been deeply convicted of the need of the press in helping out in the matter. Suppose we enlisted the services of the local paper, say once a week, giving a half column to health notes written up by a committee of physicians appointed by the chairman of the County Medical Society. This committee to look after the distribution of literature on the subject, supplemented by health lectures in all the public schools. Doubtless we would realize the results of our efforts in the course of a few years or at least on the coming generation.

Several weeks ago the writer saw an interesting experiment along the line of food combinations that was rather unique and interesting. An ordinary retort such as you would find in the chemical laboratory was used. In this retort a food combination such as you might imagine some of these patients and even doctors put in their stomachs. For instance, hot bread,

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coffee, egg, strawberries and cream, ice cream soda, to this was added a little pepsin and Hcl. diluted. The retort was corked over night, set in a warm place, shaken occasionally and results awaited. Something very interesting usually happens within 24 or 48 hours—either the cork is blown out or the container is exploded. In this instance the latter took place. This experiment when well executed has a very telling effect for an office exhibition.

We have excellent opportunity here to show how toxic products are formed. How bacteria resident in the intestinal tract act upon food-stuffs and produce toxic substances which are absorbed and act as intoxicants, increasing the blood pressure and producing a general toxemia. The normal peristaltic action of the stomach and intestines is almost entirely lost by the action of the poisons upon the nervous system, autointoxication is simply the first stage of something worse to follow. The organs of elimination are worked over time, and sooner or later some organ or organs will yield to the strain and disease sets in. Constipation most certainly follows in due time. Enteroptosis comes on in a great many instances, high blood pressure, appendicitis, rheumatism, pyorrhea, tuberculosis, gall stones, Bright's disease and many other diseases can be directly traced to these causes.

The cause for the greater part of intestinal stasis is probably due to the condition of the colon and rectum. The normal function of the colon is to absorb much of the fluid that is poured into it by way of the small intestine. Here the digestion process is completed and the refuse material prepared for elimination.

The mucous coating of the colon is frequently the seat of catarrhal inflammation. This disease not infrequently causes a separation of the mucous from the muscular coat, thus allowing the mucous coat to drop downward filling up the lumen of the lower part of the colon. This diseased condition forms a culture media for all forms of germ life, and while pathologists and bacteriologists are busy telling us that the above named diseases are due to diseased tonsils, ears and teeth, we find the colon is often the entire cause of the difficulty and the cure lies in treating this condition.

Examination of the sigmoid flexure by means of a sigmoidoscope frequently reveals a large

and impacted flexure. The fact that the sigmoid lies in the immediate vicinity of the uterus, not infrequently causes pressure and enlargement with malpositions of that organ and its appendages.

As for the treatment of stasis and constipation much has been said and written. I shall briefly explain my line of treatment from personal experience.

The first thought in every instance is to find out and correct the dietetic errors as nearly as possible. Outline the foods to be taken, also kind of exercise, hours of rest, etc.

Have the patient bring the outline along each time for any changes necessary.

Give specific directions about the food combinations, what to avoid, especially acid fruits and sweet milk combinations.

If constipation is in evidence, direct patient to take a glass of buttermilk on retiring and a glass of water on rising, and two drams agar agar, with breakfast food; instruct patient to use water plentifully between meals. Occasionally I get good results with some form of mineral oil taken three times a day.

If the case is obstinate, electricity may render valuable service in several ways. Here I find the sinusoidal current gives excellent service. Stimulation of the intestinal nerves is the object sought for. My method is to fix one electrode *over the sacrum* and the other over the spines of the *first three lumbar vertebrae*. The strong rapid sinusoidal current for fifteen minutes daily, usually brings good results within ten days, from then on the treatments are continued less frequently. While the patient is lying on the table face downward, I frequently give an additional stimulus to the intestinal nerves by means of concussion over the dumping centre which extends from the eleventh dorsal to the fourth lumbar vertebra.

Another excellent plan is to put a rectal electrode in the rectum and a wet pad over the lumbar region. This treatment has served me very well in many most difficult case of constipation. The 2,000 candle power lamp serves to relax these patients if the heat is directed immediately over the spine during these treatments.

For a prolapsed colon, and catarrh of the sigmoid, I direct treatment immediately to these parts by means of a sigmoidoscope. The mucous

lining is treated with iodine solution. *Krameria* is also a valuable remedy, as it acts as an astringent. For home treatment I direct the patient to put one dram iodine tincture in three pints warm water, this is used as an enema every other day. This treatment has also proved invaluable where there is an ulcerated condition of the rectum and sigmoid.

My attention was first directed about two years ago to this line of treatment of stasis. One remarkable feature was that many cases of hemorrhoids cleared up promptly after using this method. Another consideration for both patients and doctor is that many operations for removal of pelvic organs can thus be prevented, and the doctor enjoys the everlasting gratitude and confidence of the patient cured.

THE TREATMENT OF THE PERFORATED APPENDIX*

JOHN F. SLOAN, M. D.,
PEORIA, ILL.

My reason for presenting this paper is to cause a discussion with the hope of eliminating a habit which seems to be on the increase among some of the medical men and is indirectly encouraged by some of our surgeons and that is endeavoring to treat appendicitis medically through the attack. Before beginning the subject I wish to take up briefly some of the pathology by calling your attention to these drawings some of which are from my own cases and some from Murphy's Clinics. They show that the location of the abscess or more properly abscesses depends upon the position of the appendix and the resistance of the tissues and adhesions surrounding it as it will naturally travel in the direction of the least resistance.

We frequently find in old abscess cases several abscesses more or less separated from the original seat of infection and so located that they will not drain even though the original abscess is provided with free drainage. These of course will cause a fatal termination unless drainage is provided.

I have divided our series into three classes: First, the abscess cases a week or more after perforation; second, perforated appendix with localized peritonitis; third, the perforated case

with general peritonitis. In the first group we have had about 30 cases which were brought to us or which for some reason we were prevented from operating on early. In this group we have had six deaths. In the first case, in spite of the fact that we opened a large abscess and provided free drainage, rupture into the lung took place. He expectorated large quantities of pus and finally died from general sepsis. In the second case free drainage was provided for the original abscess, the patient improved so he was able to be up in a wheel chair, had a normal temperature for some time, dying quite suddenly three weeks after operation while temperature was still normal. Autopsy disclosed five abscesses. One large one which had evidently developed retro-ecally and ruptured into the pleura, one which had formed below the transverse colon, and three in the great mesentery. The third died from pulmonary embolism on the seventh day after opening a large abscess. Another case refused operation, was on the Ochsner treatment until the fifth or sixth day when the abscess ruptured. We operated as soon as possible but he died in about sixty hours. The other two were of the same type.

In the second group we have had about fifty cases with no deaths. In this group, operation in the majority of instances was performed in twenty-four hours to about the fifth day from the apparent beginning of the attack, the appendix removed and free drainage provided. In the cases definitely localized a fenestrated tube with a wick of gauze inside and usually a strip of gauze was introduced as far as the seat of infection. The patient was kept on his right side for about forty eight hours. In cases in which the infection seemed to be spreading, a large fenestrated tube containing a wick of gauze was introduced to the bottom of the pelvis. The patient was placed in the Fowler position, given continuous proctoclysis first, a quart of normal salt solution, followed by plain water or five per cent. glucose.

Of the third group we have had twenty cases with one death. They had given symptoms during this attack of from fourteen hours to five days usually of a colicky nature in the beginning and frequently with a history of previous attacks of colic which had cleared up suddenly. The appendix usually showed evidence of obstruction from a fecal stone or a kink from adhesions.

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The appendix in each case was removed, a fenestrated tube with a wick of gauze and usually a strip of gauze was introduced as far as the appendix region and a very large fenestrated tube containing a wick of gauze was introduced through a median stab wound to the bottom of the pelvis. In connection with this group I wish to emphasize the fact that the drainage does not cease in ten or twelve hours as is usually the case in those definitely localized, but continues freely from forty eight to seventy two hours providing the wick of gauze is changed at intervals of eight or ten hours when it becomes impregnated with the exudate and ceases to act as a drain. Several times in these cases I have seen drainage stop, the patient's condition become much worse, temperature and pulse go up and upon the introduction of a fresh wick of gauze profuse drainage immediately begin, followed by a rapid clearing up of all the symptoms. All drainage tubes used are of soft pure gum rubber with fairly thick walls and are changed for one of smaller caliber in from thirty six to forty eight hours.

Concerning the cases in which operation was refused and I was compelled to carry out medical treatment, I might say here that I am now refusing to treat these cases medically. I have had ten deaths from general peritonitis within six days of the onset of the attack. Had we followed the usual medical treatment in the second and third groups, unquestionably we would have had a large percentage of deaths from general peritonitis, and judging from our past experience a death rate of twenty per cent. of those which did localize. We also have to consider the danger of obstruction of the bowels and greater liability of hernia, extra loss of time, second operation for the removal of the appendix and less perfect recovery.

Taking all these points into consideration and the results we have had with immediate operations, I do not see why every case, regardless of hour or day of the attack should not be operated on immediately. If you will work rapidly, remove the appendix, provide efficient drainage, get out without mopping or manipulating any more than is necessary, and in the desperate advance case with general peritonitis, open up under local anesthetic, put in a drain, put the patient in Fowler position and give continuous proctoclysis as outlined, I think you

will save more lives than by any other method so far proposed.

DISCUSSION

(ABSTRACT)

DR. O'BYRNE (Chicago) liked the essayist's method of treatment, but not his terminology, his classification of cases nor the percentage of general peritonitis that get well. In an extensive autopsy experience he had never yet found a general peritonitis that was an acute infection.

In the case in which you find the abdomen full of pus on autopsy you find that perhaps only one-fourth of the peritoneum is involved. Cases of general peritonitis do not live.

The question is the character of the infection, and the number and virulence of the bacteria present, and the resistance of that individual to that infection at that time. Another point of importance is to get into the abdomen, get out quickly and not manipulate the abdomen, not attempt to wash it out, not mop it out, but provide for drainage of localized fossae of the peritoneum. You can't drain the entire peritoneal cavity ever in any case.

Another point is the removal of gauze early, removal of drainage when it is no longer of great importance, because gauze very quickly becomes not a drain but a dam.

DR. EISENDRATH (Chicago) noted the difference in the type of virulence of the organisms in appendicitis. There are some that give rise to a most virulent type of peritonitis and kill within six hours, just like they will in a very virulent type of empyema that kills within a few days. There will be enough resistance to others on the part of the organism to have multiple abscesses formed.

When abscesses form remote from the appendix, wait until they show localizing signs, then open them as they appear.

The abscesses he feared most of all is one in the true pelvis, which is apt to occur in children with appendix of a pelvic type for after evacuating the abscess, patients will frequently die of an intestinal obstruction.

In every case of acute appendicitis with or without abscess formation, whenever the patient's temperature persists longer than the local symptoms warrant, he has an x-ray taken as soon as possible.

He prefers to open abscess cases through a lateral incision and, after taking out the appendix, to sew up this incision completely, depending entirely for drainage upon a suprapubic stab wound.

In his opinion general peritonitis means the escape of real pus when the abdominal cavity is opened. With visible changes in the peritoneum itself in the form of multiple hemorrhages, loss of luster and fibrin on the intestine. Whether that has spread up along the peritoneum, so as to involve the liver, does not matter. There is no visible walling off.

Though called in frequently to these desperate cases, he now refuses to operate on them. You will save your reputation, and you will do your conscience

a great deal more good by abstaining from operating in those desperate cases where the pulse is a hundred and sixty or eighty and they are simply gone.

DR. COOK (Mendota) believes that in the average case of ruptured appendix the improvement in our surgery has grown out of a recognition of the power of the peritoneum to defend itself.

The essential thing is to get in and close the perforation, just exactly as you would do in a case of perforation from any other cause, ruptured ulcer or gun shot perforation. Then put the patient in the position that he can use his own power of resistance. He thought that drainage has been too much insisted on because ordinarily, unless there is extravasation, the peritoneum will take care of itself without much drainage. And drainage ordinarily is chiefly for drainage of the abdominal wall, which is contaminated by the necessary removal of an infected appendix.

In the ordinary perforative appendix case, the simple removal of the appendix and closing the hole, putting the patient in the Fowler position, flooding them with water by the Murphy drip and then giving absolutely nothing by mouth until the peritoneal function is reestablished by the passage of gas, then food, and it is astonishing what these cases will do.

He has not found the stab-wound drainage to be necessary.

He has found a secondary abscess in some of the cases—that is, an intestinal obstruction occurring two or three days after the original operation. Those patients have recovered, as a rule, with the formation of a fecal fistula.

DR. GOLDEN (Chicago) believes that the time to operate for appendicitis is when you see it. He always satisfies his conscience when he says to the people, "This case is going to die," and takes a chance on somebody coming in, operating and the patient surviving.

DR. SLOAN (Bloomington) thought the paper would be of great value in his part of the country, especially the point when to operate on a case of appendicitis. He had heard discussion by surgeons about waiting ten days to operate on a case of appendicitis. There may be some cases that will do better if you wait ten days, but for a surgeon who can't tell which case is going badly and which is not he thought the safest thing to do is to operate as soon as he makes the diagnosis.

Up to the present time, his opinion has been that the Lord probably knows which case is going bad and which won't, and he had little confidence that any one else knows.

DR. STRAUSE (Chicago) thought the question of operating as soon as you make the diagnosis depends largely on whether you have the patient in the hospital or in general practice in the country; if you were in the army, the operations were as soon as diagnosis. But, unfortunately, he saw some pretty bad diagnoses.

If every time you get an irritation of the appendix you call that appendicitis, you ought not to operate on any case as soon as you make the diagnosis. In

illustration he mentioned the case of a child brought into Michael Reese Hospital about midnight for an emergency operation. The child had a very marked tonsillitis, both sides. There was no question but that child had some irritation of the appendix region. The pain was there; there was some slight resistance. That child's temperature was somewhere between 103 and 104.

With a patient in the hospital, where you can watch him from hour to hour, and with a very marked tonsillitis, it seems a very poor time to do an emergency operation, if you can wait and determine later whether the rigidity increases or whether the urgency seems more marked. Otherwise he fully agreed with making as a routine the early operation.

Other things being equal, if a person is very careful in his technique, it seemed to him that the majority of appendices that are ruptured should be removed at the time of the operation. There may be rare cases where it is not wise to do it, but he thought there are very few.

PERI-TONSILLAR ABSCESS AND ITS RADICAL TREATMENT*

L. OSTROM, M. D.,

Major, M. R. C.

ROCK ISLAND, ILL.

You have a great deal more sympathy for the patient and a greater respect for the disease if you yourself have suffered from the disease that brings your patient to you for relief. If any of you have suffered as often and severely from tonsillitis and quinsy and have tried all the different remedies from iodine to incision, as the author, you would perhaps agree with his enthusiasm in favor of his present method, though it is true that an enthusiast is apt to go too far at times. Like the rest of those who suffer from this trouble he belonged to that big class we call procrastinators; when well he couldn't spare the time and when sick nothing was done except treatment.

It is, of course, ideal to operate when the patient and the part to be operated on is in the best condition. Pathogenic bacteria, however, are often found in so-called normal throats. Dr. H. B. Van Dyke,¹ Jr. A. M. A., Feb. 14, 1920, reports finding hemolytic streptococcus in throats even a long time after perfect tonsillectomy, so any surgery in the throat should open up avenues for infection.

Peritonsillar abscess often comes like thunder out of a clear sky without any warning or

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previous symptoms and the outcome is always doubtful. Once having had quinsy we can be quite certain that other attacks will follow.

There are some doctors who attempt to treat this condition without surgery. N. C. Forsyth,² Br. Med. Jr., London, March 13, 1920, reports a selected series in which he used anti-streptococcus serum (10 Cc.) in acute quinsy. Relief of pain was obtained in 6 to 12 hours. In no case were the symptoms so severe that incision had to be made, and in all so treated, pus was discharging on the fourth day of illness.

Others cure all their cases with echinacea, quinine, aspirin, urotropin, leeches to the throat, etc., which reminds me of remarks sometimes made by Jewish patients: "Doctor, I was by you here yesterday and you cured me, but I'm worse today."

At present only a few surgeons are bold enough to remove the tonsil during an acute attack. The fact, however, that there are some who report tonsillectomies during acute attacks of follicular tonsillitis, peritonsillar abscess, endocarditis, acute infectious diseases, chorea, inflammatory rheumatism, tuberculosis, etc., usually considered contra-indications, proves that in selected cases there must be some valid reason at times for this radical method in spite of the objections.

It is also interesting to hear doctors admit having removed tonsils during quinsy without originally intending to do so. It is also pertinent to note that as far as I know there are no bad results on record directly following this radical—I prefer to call it rational—method. Undoubtedly there have been bad results, because if you do enough of any kind of surgery your records will contain all kinds of results. I simply have not seen any reports of any bad results and have had none myself (in close to 250 cases).

At a recent meeting of the Chicago Laryngological Society Dr. J. Holinger read a most valuable paper recording his experiences covering the last 7 years, to which, of course, exception was taken, but in the discussion that followed, others admitted having done the same thing with good results.

Barnes and Thiesen have reported a good many cases.

While the better known writers and teachers as yet do not favor this procedure, of course,

the unknown and less prominent men will hesitate to report their work. The longer one practices the less apt is he to adopt innovations. Time may also prove that it is all wrong, but at present it is at least an open question.

In the *Laryngoscope* for February, 1920, Dr. Cookley reports a series of interesting cases, while not directly peritonsillar abscesses, yet are very pertinent to this subject. He reports a series of cellulitis and abscesses in the parapharyngeal tissues, which for the purpose of this paper is the best support I have found. In a number of his cases it was impossible to drain the abscess into the throat, so he made free and deep external incision. If the argument that you open avenues of infection by any surgical process is correct, he ought to have had serious infection following every case. The opposite, however, was the case. All recovered after free external incision. He makes a splendid classification of peritonsillar abscesses as to location which I wish to use:

1. Greatest accumulation of pus external to and above the middle of the tonsil.
2. Marked infiltration of the posterior pillar; pus burrows downwards along the side of the pharynx behind the tonsil.
3. Formation of abscess external to the tonsil with a tendency to extend anteriorly to the side wall of the pharynx.

To this I want to add a fourth—where there are multiple abscesses (chronic peritonsillar abscesses) in the tonsil, *external* to the tonsil, and *external to the superior constrictor* (also mentioned by Dr. Holinger).

Keeping this classification in mind it is not always exact surgery to try to drain a quinsy, by separating the anterior pillar from the tonsil, at least not if the anterior pillar is a mass of scar tissue, because if there are multiple abscesses, or abscesses external to the superior constrictor you are apt to be in greater danger than in doing a complete tonsillectomy. At times, in fact, after cutting the tonsil and pillars almost into shreds you sometimes fail to find pus, either because you operated too soon, or missed the hidden pocket entirely.

It is certainly poor technique to stab the edematous tissue, according to somebody's rule and expect to relieve symptoms in all cases.

Harmon Smith,³ *Laryngoscope*, February 20, 1920, said in discussing Dr. Cookley's paper,

that instead of directing one's surgery to the symptoms—edema—it should be directed to search for the cause of the same (tonsil or abscess?).

In the same issue,⁴ *Laryngoscope*, February, 1920, Dr. Glogan⁴ recommends the removal of tonsils and adenoids during an acute otitis media, presenting cases and results that fully justify his procedure.

If the argument that during an acute attack you open up avenues of infection, is correct, his results should have been bad. Dr. Kerrison in the discussion is also emphatically in favor of the same thing. An acute otitis media with mastoiditis or a para-pharyngeal cellulitis or abscess is not far removed from a peritonsillar abscess except by a slight difference of location, so if free surgery is correct in the one it ought to be at least just as safe in the other.

Dr. Cookley uses local anesthesia; Dr. Holinger uses ether. Each case ought to be a law unto itself.

The only reason for failure to obtain satisfactory local anesthesia is an idiosyncrasy of the patient or else an insufficient or improper use of the anesthetic.

Dr. M. A. Golstein,⁵ *Laryngoscope*, October 19, 1919, reports 20 cases of simple and radical mastoid operations using cocaine-novocain—adrenalin—and obtained perfect anesthesia. I mention this because some have said it is almost impossible to obtain anesthesia in acute osteitis with its attendant tenderness and inflammatory extension.

If perfect anesthesia can be obtained here during an acute osteitis we certainly can produce it in the throat also.

I have used ether only in children.

My own preference in adults is 0.2 or 0.1 per cent. cocaine—adrenalin. I feel more at home with it and it has given me entire satisfaction.

For an ordinary tonsillectomy 1½ drachm per tonsil is usually enough, but I have used as much as 1½ ounce of 0.1 per cent. solution in one tonsil with quinsy. I have never seen any bad effect after using a larger quantity. One-half hour before operation atrophine sulph. gr. 1/150 hpyo is given. After the operation I give morph. sulph, gr. ¼. This saves me the annoyance during the operation of nausea and vomiting in case of idiosyncrasy,

for which the local anesthetic usually gets the blame.

I depend on infiltration for my anesthesia, starting at the point easiest to reach, usually to the side of the uvula, then down along the anterior pillar, in the base of the tonsil, posterior pillar, then extend it as dissection proceeds whenever the patient feels any discomfort or pain.

The technique is little different from ordinary cases. The greatest obstacle is when the teeth can be opened but very little, and when the tongue is unruly and strong, but we have hardly as much room in bronchoscopy or ethmoid operations.

We need a little more patience and a more delicate touch.

Perhaps the most important thing is the confidence the patient has in you. A patient to whom you are a stranger seldom makes a good patient for local anesthesia. You can chase his confidence to the winds if you act rough, or cause any needless pain.

In some cases it is best to begin the dissection below and work upwards. Great care must be used when any traction is made on the edematous tissue of the pillar otherwise it tears. Of inestimable value is a small tube (large eustachian catheter) connected to an aspirator, held in the corner of the mouth to aspirate the thick tenacious saliva and pus. The ordinary aspirating tip, or ordinary rubber tubing if used by the patient himself to spit in is a great help to save time and to keep from messing up the patient.

I have always removed both tonsils at the same time and have had no reason to regret it.

CONCLUSION

1. Great saving of time and suffering for the patient.

2. The operation is safe and rational.

3. The operation differs very little from ordinary tonsillectomies with much scar tissue.

4. There is actually less suffering after the radical operation than after ordinary lancing or ordinary tonsillectomy, and the average recovery is more rapid.

Dr. Holinger referred to his argument on this subject before the Chicago Society, where those who had had experience with the method were in favor of it, and those who were against it had to admit they had never used it.

Since that time he had had occasion to extirpate two pairs of tonsils, one with abscess in each case.

Especially in the last there was considerable swelling just at the bottom of the tonsil, and as soon as the mouth was opened and the tongue depressed, the whole pharynx was filled so that the patient simply couldn't breathe. Lifting up the tongue with a hook and pulling it forward gave very little space. By operating quickly, about a tablespoonful of pus was drawn out.

In order to avoid this condition in future he had Mueller make a tongue depressor holding a tube for either respiration or for direct inflation. This tongue depressor can pull the tongue forward, and at the same time either force the air through or allow the patient to breath through this tube.

Dr. Tiven had not used this method and was opposed to it as it seemed to be a distinct violation of all surgical principles. In his experience pus can be located by incision in fifty per cent of the cases and the patients get well very rapidly. He does not see any analogy between operating on a mastoid and operating on a peritonsillar abscess. The mastoid operation is to be relegated to the column of a life-saving proposition, whereas the peritonsillar operation is simply a matter of relieving pus and distress.

He would not like to use a needle one-half inch in length on account of the abnormal position of the blood vessels.

THE LABORATORY AS AN AID IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE THYROID GLAND*

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Normal functioning of the thyroid gland is essential to an individual's sense of well being. The thyroid is the balance wheel of metabolism, influencing the oxidative processes of the body, that is the rate at which the cells of the body utilize fuel. This fuel comprises the three large classes of food, namely, proteins, carbohydrates and fats. If thyroid gland¹ or its active principals is fed to healthy men there results an increased excretion of urea, and if the feeding be persisted in there will soon be an increase in the amount of urea excreted over the exogenous protein consumed. These men will lose weight; they are burning fuel more rapidly than they are obtaining it. Since urea is derived from the nitrogenous waste of the body and since this nitrogenous waste is derived from protein katabolism and since protein katabolism is stimulated by thyroid feeding, the relation

is established. Moreover this fact is observed not only in the experiment outlined but also in patients presenting symptoms of hypersecretion of the thyroid and in patients in whom there is an apparent hyposecretion. The former tend to excrete an excess of urea over their protein intake. They often lose weight in spite of the prodigious appetite. The latter excrete a subnormal amount of urea, but if given thyroid extract they soon increase their nitrogen katabolism, the degree of which may also be measured by their increased excretion of urea; at least an increase over what have previously been their normal level.

These observations in man have been substantiated by experiments with animals where it has been shown that if these are fed thyroid extracts they too show an increased metabolic rate, while if the gland is removed the rate falls. Cannon² demonstrated that a constant stimulation of the thyroid in cats by way of the sympathetic system greatly increased their appetite and caused a loss of weight as well as other symptoms of hyperthyroidism. Basinger³ working with young rabbits showed the dramatic effects produced by the removal of the thyroid gland and the subsequent splendid recovery upon feeding thyroid extracts. Implants of thyroid tissue in various parts of the body have been shown to function and prevent symptoms of hyperthyroidism. Koehler⁴ says that an implantation of normal thyroid from man or animal, if successful, is the best way to treat deficiency diseases of the thyroid.

From the viewpoint of protein metabolism alone, there is therefore a marked contrast between the normal man and the one in whom there is an excess or a deficiency of thyroid, as well as between the normal experimental animal and the one fed thyroid extract or the one thyroidectomized, and therefore between hyperthyroidism and hypo-thyroidism. This contrast, this increased or decreased metabolism (if you please) if properly measured is to-day the one constant and reliable finding in the diagnosis of thyroid diseases.

Unfortunately for the laboratory a determination of the amount of urea excreted will supply only confirmatory evidence as to a wasting or sparing of protein metabolism in its association with thyroid disorders. An increased excretion of urea is not pathognomonic of hyperthyroidism

*From the private practice of Dr. Karl F. Snyder to whom I am indebted for the privilege of presenting this paper.
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any more than is a decreased excretion of urea pathognomonic of hypothyroidism. Urea is the end product of protein metabolism. Its quantity is dependent upon the total amount of protein ingested, upon the excretory powers of the kidneys, upon the formative power of the liver and other tissues, and especially upon many factors resulting in tissue destruction. In order that the quantitative estimation of urea might be of considerable value it would be necessary to determine accurately the amount of protein consumed in the food and that eliminated as nitrogen in the various excreta of the body. To do this properly would entail a task too arduous and impracticable for the laboratory isolated from a hospital.

It has been suggested that the quantitative determination of the amount of creatin eliminated in the urine might clarify a diagnosis of thyroid diseases. The literature is not definite however. Creatin⁵ is a nitrogenous extract of muscle and is found only in very small amounts in normal urines. That which is normally excreted is wholly exogenous, there being no normal excretion of endogenous creatin. In clinically diagnosed hypothyroidism there is an increased excretion of creatin.⁶ While this is not an index of cellular destruction it is an evidence of disordered metabolism.⁷ Creatin elimination and carbohydrate metabolism have been shown experimentally to be closely related. A fasting man excretes appreciable amounts of creatin in his urine. If, however, he be fed carbohydrates this excess creatin disappears from the urine. It is apparently oxidized in the body. Thyroidectomized animals show an excessive creatin output.¹

It is evident then that the quantitative determination of creatin would supply us no direct evidence as to thyroid disorders. This conclusion is justifiable for as has just been stated an increased creatin excretion is not evidence *per se* of the perverted tissue metabolism so regularly found in thyroid diseases, but is rather an indication of perverted carbohydrate metabolism. But carbohydrate metabolism as shall soon be indicated is markedly influenced by the secretion of the thyroid. At best then, an increased creatin excretion is only indirect evidence of dysfunctioning of the thyroid and is of value only in so far as it may be a measure of the influence of this dysfunctioning on carbohydrate metabolism.

The mechanism by which the thyroid gland influences carbohydrate metabolism is not known. Experimentally thyroidectomized animals may fail to show glycosuria from various procedures which usually produce it, nor are they able to utilize sugar injected parenterally as well as normal animals. Thyroidectomized dogs regularly develop a hypoglycemia.¹ There is an increased tolerance to glucose as determined by testing the urine.⁸ The blood sugar in dogs after thyroidectomy shows an average decrease of 25 per cent from the normal.⁹ In hyperthyroidism as well as in hypothyroidism and in thyroidectomized animals there may be delayed sugar curves, that is delayed sugar assimilation.

Numerous investigators have reported their observations on the relation of thyroid disorders in man to carbohydrate metabolism. In fact there has developed what is known as the hyperglycemia test as an aid in the diagnosis of thyroid disorders, the technic of the test varying somewhat with the individual observer. Means and Aub¹⁰ conclude that fasting hyperglycemia is an extremely rare occurrence in hyperthyroidism; that alimentary hyperglycemia following the administration of 100 grams of glucose and 50 grams of bread was observed in every case of hyperthyroidism examined; that no relation, however, existed between the degree of hyperglycemia and the intensity of glycosuria; and that it was impossible to obtain any evidence of a relation between the severity of intoxication as measured by the percentage increase over normal of the basal metabolism and the occurrence of hyperglycemia. Janney and Isaacson⁸ giving a definite amount of chemically pure glucose per kilogram body weight show that there is a delayed blood sugar curve in diabetes, acromegaly and chronic interstitial nephritis, and that there is a hypoglycemia in cretinism, myxedema, Addison's disease, and hypophysial dystrophy. They¹¹ further report that the blood sugar tolerance test is more important than the fasting blood sugar level in exophthalmic goiter, for in this disease the fasting blood sugar level is often normal.¹¹ They also state that as far as present observations go "the results of the blood sugar tolerance test seem an early and definite sign of thyroid disease and serve as an indication of the severity of the underlying metabolic disturbance." These authors state further, that there may be a hyperglycemia, speaking in terms of

the test, following the ingestion of a definite amount of glucose in persons giving no evidence of thyroid disorders and who appear quite normal. In these, however, the sugar assimilation curve returned to its normal level much sooner—at any rate before the close of two hours and often before the close of one hour. Our own data is in accordance with this conclusion. We also have found a hyperglycemia following the Janney technic in all cases of suspected hyperthyroidism tested. McCasky¹² says: "In every case of hyperthyroidism studied the blood sugar content was increased within two hours from 50 per cent to 200 per cent." He adds, however, that a hyperglycemia is found in other diseases such as diabetes, alcoholism and quoting Pemberton, arthritis, and that "the alimentary hyperglycemia test can only be regarded as confirmatory, our main reliance being placed on basal metabolism." Smith¹³ summarizes the present state of our knowledge in this matter when he says that a delayed sugar curve in clinically diagnosed or suspected hyperthyroidism is at least suggestive of a disturbed carbohydrate metabolism and might be considered confirmatory evidence in favor of the diagnosis of hyperthyroidism when associated with other reliable positive findings. Meyer¹⁴ reports a hyperglycemia lasting more than two hours after the ingestion of 100 grams glucose in patients suffering from thromboangitis obliterans. Kooy¹⁵ states that a hyperglycemia is frequently found in individuals afflicted with mental disorders, the hyperglycemia often increasing with an increase of the emotions. Rohdenburg¹⁶ and others find a hyperglycemia lasting more than two hours following the ingestion of 100 grams of glucose in patients suffering from cancer.

This brief resumé of the relation of the thyroid gland to carbohydrate metabolism, in so far as a measure of this relation is of any significance in the diagnosis of hyperthyroidism and hypothyroidism and when measured by any of the tests now commonly employed in laboratories justifies this general summary. A hyperglycemia, a hypoglycemia and a delayed assimilation of sugar furnish only supportive evidence, and are present in an array of disorders which cannot at this time be ascribed to improper functioning of the thyroid gland; that carbohydrate metabolism is influenced by endocrine glands other than the thyroid and in conditions

where seemingly the thyroid plays a minor role; and that while a positive reaction does not mean hyperthyroidism or hypothyroidism a negative reaction tends to eliminate these conditions.

Permit me to comment briefly on the relation of the thyroid to fat metabolism. Wells¹ states that there results an increased destruction of body fat on feeding thyroid extract to normal men, so that thyroid therapy has been found efficient in the treatment of obesity, though he adds, the treatment is not without its dangers. Mac Callum¹⁷ makes his comment: "There are certain unfortunates who in spite of efforts to limit their diet strictly and to take abundant exercise grow enormously fat. It seems possible that in these cases there may exist some defect in such organs of internal secretion as the thyroid or hypophysis, whose secretion appears to enhance the activity of metabolism in general. In known cases of hypophysis defects in young persons great obesity arises, and in cases in which the thyroid has been destroyed a similar if less extreme obesity may arise." Stevens says¹⁸: "In man the most constant effect of thyroid extract in medicinal doses is increased oxidation, in consequence of which a considerable reduction in body weight occurs. Both proteids and fats suffer disintegration but only one-sixth of the loss of weight can be attributed to the destruction of nitrogenous compounds, the rest being due to the oxidation of the fats and to the increased excretion of water." The protein sparing action of fat metabolism is a matter of common knowledge. I know of no practical attempts having been made clinically to control thyroid therapy in obesity by basal metabolism determinations though with the apparatus now available it seems that such controls should be rational enough.

Various manifestations of instability of the nervous mechanism of the body are relatively constant features of thyroid intoxication. They may be produced by thyroid feeding. No doubt many of you can recall the anxious patient who probably complained first of a rapid or irregular heart. Or the one who was troubled with a hot moist skin; or who was "so nervous;" or who had the characteristic tremors. Diarrhea may have been present, sleeplessness and so on. Plummer¹⁹ says: "The clinical picture early in the history of Graves' Disease is that toxin acting directly on the more vital organs most

notably on the central nervous (system) and vascular system." Halsted²⁰ is of the opinion that the thymus gland either alone or acting through or in conjunction with the thyroid may be responsible for many of the symptoms usually ascribed to the thyroid. He believes that the thyroid sends out impulses along both the sympathetic and autonomic systems which may account for the diversity of nerve symptoms so frequently observed. X-ray and surgical treatment of the thymus in conjunction with the thyroid often relieve a symptomatology which such treatment of the thyroid alone fails to relieve. Halsted further states that between the thyroid and adrenals there exists a reciprocal potentiation. In other words patients already under the influence of thyroid intoxication should give a positive reaction to the injection of a definite amount of adrenalin while persons not so intoxicated should not so react. The Goetch Ephinephrin test for the diagnosis of thyroid intoxications is based on such observations. No uniformity of opinion exists as to its value. Goetch²¹ believes the test to be of importance in differentiating between early hyperthyroidism and early tuberculosis. Tuberculosis uncomplicated by thyroidism does not react. Hyperthyroidism complicated or not by tuberculosis reacts. He has²² also found it of great service in estimating the degree of hyperthyroidism. Bernard²³ thinks the test is of value in dubious cases suggesting exophthalmic goiter but without the cardinal signs of it. Nicholson and Goetch²⁴ using the test on patients at the Trudeau Sanitarium confirm their previous opinion that it is of value in differentiating between tuberculosis and hyperthyroidism and now administer it as a routine to all patients entering the Trudeau Sanitarium. Smith¹³ is inclined to place some faith in the test though he apparently believes that there may be a hypersensitive sympathetic which is not associated with hyperthyroidism. Boothby and Sandiford²⁵ of the Mayo Clinic state that their data show that there is no relation between the character of the adrenalin reaction and the degree of activity of the thyroid gland and therefore in their opinion, contrary to that of Goetsch, the reaction is not indicative of the presence or absence of hyperthyroidism.

Individuals already suffering from thyroid intoxication tend to react much more readily to

thyroid feeding as well as to adrenalin administration than normal individuals. This hypersensitiveness to thyroid feeding has been employed at times to diagnose thyroidism and to differentiate it from other disorders. The test is not without its dangers. Thyroid extract in hyperthyroidism as one writer forcefully puts it, is like adding oil to a fire. Sudden deaths from such administrations have been reported. Osler mentions the development of an acute goiter from a hypothyroid condition due to the administration of thyroid extract. If this test is employed the greatest caution must be exercised and it must be discontinued promptly on the appearance of the first symptom of increased intoxication. That the active constituents of the thyroid are very potent substances must be appreciated and indeed has been amply proven by the researches of Kendall.

The query will probably arise as to the value of a blood cell count and a differential count in diagnosing thyroid cases. Simon and Sahli leave the reader under the impression that these blood findings are too vague and uncertain to be specific. A. Kocher however finds that a complete blood-cell examination in diseases due to the loss of thyroid and parathyroid function and thyrotoxic conditions reveals changes which are characteristic and constantly present. C. Mayo says that the prognosis in thyroidism cannot be made by the blood count. Recent reviews give a relative increase of 30 per cent in small mononuclear cells. Plummer basing his report on a study of 578 patients with exophthalmic goiter concluded that the blood picture was not remarkable and that a differential count is of limited value in diagnosis.

Attempts have been made to associate hyper and hypothyroidism with a luetic infection. Syphilis of the thyroid gland is a rare condition. To be sure some thyroid patients give a positive Wassermann reaction. We have met such cases among those we studied. Wassermans are therefore a part of the routine examination as they should be. I do not know what influence syphilis *per se* has on the basal metabolism rate nor yet the effect of antisyphilitic treatment on non-specific thyroid diseases.

It has been stated that the diagnosis of thyroid disorders is a function of the laboratory. Among the laboratory procedures thus far discussed, however, nothing has been detailed which

will yield information reasonably uncontroversial as to the presence of thyroid disorders nor yet as to the degree of such disorders when they can reasonably be assumed to be present clinically. Nor is the laboratory alone in this quandary. The clinician and diagnostician are equally at a loss, unless they possess the same "sang froid" which a physician recently gave evidence of possessing. Discussing with him the value of basal metabolism determinations in thyroidism, he said: "Of course that may be well enough from the standpoint of the doctor who has time to fool with it and wants some advertising, but to one of experience it is scarcely necessary. I have fooled around with Ochsner a few years and with Kocher a few years and in Berlin a few years. I believe I can make my diagnosis correctly without such determinations." With such criticisms no doubt as this in mind Du Bois writes: "But why," says the practitioner, "should I who have seen hundreds of cases, go to all this trouble when I can tell perfectly well from the clinical aspect whether or not the metabolism is increased?" Such guessing is very common, quite fascinating and not risky for one's reputation unless the results are checked. On the other hand, those clinicians who have checked up their guesses in two or three hundred experiments realize the frequency of their errors especially in atypical cases and are not at all surprised if they do not come within 40 per cent of the true figure.

The diagnostician who interprets the basal metabolism intelligently will be able to determine the degree of thyroid activity. The surgeon who operates on thyroid patients will find that the basal metabolism is of great help in following his results. He will also find that in many cases a 15 minute test with the respiration apparatus will save the patient a needless operation." It must be borne in mind that the determination of the basal metabolism rate is not, however, a matter for idle hands and moments for the readings to be of value must be accurately made, controlled, and properly corrected. After this has been done, there still remains the necessity on the part of the clinician and surgeon to weigh these findings along with all other symptoms. Basal metabolism determinations are a technical matter. Their interpretation and correlation also must be most intelligently made indeed.

Basal metabolism is defined as the metabolism of the body at complete rest and a total abstinence of food for at least 12 hours. A liter of oxygen produces the same amount of heat, equal to 4.825 calories, whether burned in a retort or in the body, nor is it increased on the respiration of pure oxygen. For the study of metabolism in the various states of health and disease there have been perfected calorimeters for direct calorimetry and indirect calorimetry. The Tissot apparatus and the Benedict portable apparatus are well known examples of the latter. In the field of metabolism studies the names of Magnus-Levy, Voit, Pfluger, Zuntz and more recently Benedict, Carpenter, Lusk, Du Bois, Boothby and many others stand pre-eminent. Carpenter²⁶ on the basis of extensive comparative studies concludes that generally speaking the results obtained by the Benedict portable respiration apparatus compare favorably with these obtained by the more elaborate apparatus. Benedict²⁷ has made a similar comment. Benedict and Carpenter both state however, that their laboratory has at no time or place recommended the portable apparatus for the diagnosis of or as an index of treatment for any specific disease.

The standards of comparison are first, those of Du Bois²⁸ who has prepared tables based on his height, weight formula giving a normal individual's basal metabolism per square meter body surface per hour depending upon the age and sex; and second, those of Harris and Benedict²⁹ who give the basal metabolism for 24 hours depending upon age, height, weight and sex. The metabolism of women is 7 per cent lower than that of men according to Du Bois and 6.2 per cent lower according to Harris and Benedict. The two formulas compare favorably. Basal metabolism varies to some degree daily in a given individual and of course between individuals. Variations of as much as 10 per cent plus or minus from a standard are considered to be within normal limits. The greater the variation the greater the degree of pathology. Constant findings of 15 per cent plus or minus are to be considered distinctly abnormal. On the other hand it must be borne in mind that as yet there are no inflexible normal values for adults and that a considerable variation may appear in individuals who so far as is discernable are normal. Hendry, Carpenter and Emmes³⁰ in a recent report of the studies with

17 unpracticed subjects state that two showed a metabolism 14 or more per cent. below "normal" and one a metabolism 11.5 per cent. above "normal"; and in the study of 12 normal young men in a diet investigation one showed a metabolism 14.3 per cent. above the so-called "normal."

There are a number of excellent reviews and papers on basal metabolism in the current medical literature on its relation to thyroid disorders. Their general trend is one of splendid favorable accord. A cursory summary of these is, however, all that is possible. Benedict, Du Bois, Boothby, Means and Aub, McCasky and others are authorities for the statement that in no other disease is the basal metabolism so constantly high as in thyrotoxicosis or so constantly low as in hypothyroidism. According to Du Bois³¹ it is higher in youth, fever, lymphatic leukemia, pernicious anemia, in severe cardiac disease and some cases of diabetes and cancer. Disease of the ductless glands other than the thyroid show in some cases an increase, in some a decrease. Means and Aub³² report that patients who came under their observation suffering from neurasthenia, psychoneurosis, Raynaud's disease, elephantiasis, Addison's disease, metrorrhagia, pernicious anemia (in a state of remission), secondary anemia, irritable heart, obesity, inactive acromegaly, psoriasis and pelvic inflammation had without exception a basal metabolism within normal limits as compared with the Du Bois standards.

Boothby³³ has found that convalescent post-operative cases of acute appendicitis, hernia, varicose veins and alveolar abscess with normal temperature have shown almost invariably a basal metabolism within normal limits when compared with the same standard. Means³⁴ reports that a single case of advanced phthisis which he studied had a normal basal metabolism. It will be observed that these are all disorders where a diagnosis should cause little difficulty to the alert clinician. We made basal metabolism determinations on a patient who had recently been diagnosed as tuberculous (moderately advanced) and found the basal metabolism normal.

Basal metabolism is a measure of the toxicity of the thyroid. In this it surpasses such symptoms as a rapid heart, loss of weight, tremors and so on taken singly or collectively. These only furnish a rough measure of the pathology.

Sistrunk³⁵ states that the metabolic rate is a definite index to the degree of hyperthyroidism in a given patient at a given time, and that it is of very great value as a diagnostic aid in the early stages of exophthalmic goiter when studied in conjunction with the symptoms and general appearance of the patient. He makes a careful selection of the type of operation for patients with a rate above 40 per cent. plus. He hesitates to perform a primary thyroidectomy when the rate is from 60 to 70 per cent. above normal.

Du Bois says that basal metabolism is a functional test of the thyroid and without it we would be as helpless as we would be in the detection of diabetes without a test for sugar, and that clinicians who pay no attention to gaseous change neglect the most important phase in the study of thyroid.

The direct relation between the thyroid and basal metabolism has been shown by Plummer³⁶ (quoted by Kendall) who says that the administration of 1/3 mg. of active isolated constituent of the thyroid raises basal metabolism 1 per cent. in an adult weighing 150 lbs.

In determining the functional activity of the thyroid permit me to cite an instance.

Mrs. J. D., a young married woman, twenty years of age, had a prominent goiter which she had had since a child. She stated that her mother and grandmother and aunt on her mother's side and an aunt on her father's side all had had similar enlargements. The aunt on the father's side had a thyroidectomy performed by Dr. Snyder, May 1919, and microscopically the gland was a typical colloid goiter. The patient's little boy two years of age has an enlargement in the neck. The patient was in general good health except for pressure symptoms. Five basal metabolism readings averaged 50 per cent. minus which proved clearly a considerable deficiency in the basal metabolism rate. Because of the extreme pressure symptoms the thyroid was removed but unfortunately it was lost before histological examinations could be made. This case is of especial interest because of its apparent hereditary tendency and because it seems to indicate that the hypertrophy was due to a want of thyroid activity. No determinations have been available since operation.

J. B. Murphy³⁷ states that before operation a surgeon must determine the type of goiter present. Here again a measure of the heat production supplies the desired information. For example:

Mrs. A., aged 52 years, a rather angular thin woman, had a conspicuous enlargement of the neck which was 37 cm. in circumference. The neck too, was full, rounded, protruding and bilaterally enlarged.

She had a hacking cough, somewhat productive, and complained of being tired. The pulse was about normal; respiration shallow, rapid and uneven. She had had the enlargement for some years, though during the last six months she was feeling worse than before. A clinical diagnosis of a colloid goiter becoming toxic was made. The basal metabolism rate was difficult to procure because of the patient's general condition and respiratory disturbances. Three satisfactory readings were made which gave, according to the Du Bois formula, an average of 1.7 per cent. minus. Toxicity was therefore not proven. It is possible that she was suffering from a colloid goiter and that they had a basal metabolism determination been made months ago a deficiency of thyroid secretion would have been observed in a lowered rate; that she has been gradually increasing her rate; and that while not now toxic a few months from now she may be so.

In the border line cases where the clinician is at a loss to determine the trouble, basal metabolism determinations will often be a deciding factor. In acute thyroidism these are invaluable. It might be permissible to mention here that we have been privileged to study two patients who apparently had acute thyroidism following an infectious disease; one, influenza; the other, influenza and a very severe and prolonged sore throat. Roeder³⁸ recently reported 10 patients suffering from acute thyroidism following influenza. The effect of preoperative rest, x-ray treatments, radium, serums and so on can be measured and an opportune time chosen for operative procedures. The surgeon is enabled to follow the convalescence of his patient during which basal metabolism determinations serve as guide posts by which he directs the patient's return to normal health.

As an example of an order line case I will cite Mr. D., who is a very healthy appearing man, aged 42 years, 5 feet 10 inches tall and weighs 226 lbs. He has a 4 plus Wassermann. His chief complaint was a profuseness of perspiration which he had always had, upon the slightest endeavor. His heart was irregular with a rate of 80. He had shortness of breath. For these symptoms he was referred to the laboratory. Six basal metabolism determinations averaged nearly 11 per cent. plus, on the basis of which a diagnosis of thyroidism could not be made. There was no evidence of thyroid enlargement. His heart findings were negative.

Again, Miss K., a nurse, is 27 years old, 5 feet 7 inches tall and weighs 134 lbs. She had lost a little weight but complained chiefly of a rapid heart and a general sense of feeling ill. She was convalescing from an attack of influenza. The heart had been rapid for some time. An average of six basal metabolism readings was 8.3 per cent. minus. Not even a

tendency towards hypothyroidism was therefore indicated. Rest in bed for 24 hours reduced the heart rate from 84 to 68. An irritability of the cardiac mechanism seems evident. She had no apparent enlargement of the thyroid. The heart findings were negative.

To summarize then; the quantitative determination of blood sugar, the hyperglycemia test, the blood picture, the Goetsch Epinephrin test, the administration of thyroid extracts, and the basal metabolism rate as laboratory aids in the diagnosis of thyroid diseases have been discussed. A cursory review of the literature indicates that none of these except the basal metabolism rate supplies data which is of true assistance in the diagnosis of these disorders. Of the basal metabolism determinations, it may be said that they are of invaluable service in the differential diagnosis of border line cases, in determining the degree of hyper or hypo function of the thyroid; in protecting the surgeon and the patient in the choice and time of operative procedures; in following the preoperative and postoperative course of a patient; in measuring the effect of palliative treatments; and in pointing out the type of goiter more accurately and satisfactorily than any other way.

In the words of Boothby: "We believe that the general use of the basal metabolism rate for the diagnosis and during the course of treatment of disorders of the thyroid gland will advance our knowledge and ability properly to treat these cases the same way as the introduction of the thermometer aided in the diagnosis and treatment of febrile disorders."

State Bank Building.

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REMOVAL OF NAIL FROM THE LEFT BRONCHUS BY THE AID OF THE FLUOROSCOPE

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In reviewing the literature on the subject it seems that this is the first attempt at removal of a foreign body from the bronchus without the use of the bronchoscope, using only a long forceps guided by the fluoroscope.

This procedure will lead to other possibilities, such as the removal of foreign substances from the esophagus, locating and dilating of esophageal strictures, application of radium to malignancy of the esophagus or even of the stomach, a means of differential diagnosis between bodies in the esophagus or trachea, etc.

Case Reports.—Mike Dangovich, aged three years, was brought to the South Shore Hospital September 11, 1920, with a history of having swallowed a nail four days previous. Following the accident the patient had several coughing spells which became less in number and severity as the time wore on.

The boy was somewhat anemic and appeared fretful and irritable. Physical examination was negative.

The patient was brought to the x-ray room for picture and fluoroscopic examination which showed the nail in the mid chest. In order to ascertain whether the foreign body was in the bronchus or esophagus we put the patient to sleep and introduced a stomach tube guided by the fluoroscope.

In moving the tube up and down the nail

remained stationary, showing that the nail must be in the bronchus (left).

Observing how accurately I could approach the location of the nail with the tube, I decided that there would be no great difficulty in removing the nail from the bronchus by the same method.

Two days later the patient was again anesthetized and, with the assistance of Doctors A. W. Stanton and Thomas Ryan, a bronchoscope forceps was introduced into the trachea. Without great difficulty the nail was removed from the left bronchus; the whole maneuver was clearly seen through the fluoroscope.

The patient left the hospital September 15th. Re-examination September 21st.

Patient appears perfectly normal. Chest examination proved negative.

SOUTH SHORE HOSPITAL.

IS THE HUMAN EYE DEGENERATING?*

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The question contained in the title of this paper is one that has doubtless occurred to the members of this section many times. It is one also that has undoubtedly been asked every oculist by patients and others who show an interest in the well being of the community or body politic. In fact, we are not infrequently asked as medical men, if the human race itself is not deteriorating, if, as a result of our manner of living, habits and customs of the present day and those of the past generation or two we are not gliding down the scale of mental and physical perfection to that of manifest mediocrity or worse.

Mankind from an early day has experienced many and varied changes as the years have passed. Even those of us who have lived in the closing days of the nineteenth and the two decades of the twentieth centuries have noted decided variations in our ways of living. Some of us can remember when the tallow dip was a common means of house lighting and kerosene or "coal oil" was something of a luxury. Illuminating gas was generally used in the larger cities thirty or forty years ago and electric lights were classed as a novelty, but three or four decades ago. Motion

*Read before the Section on Eye, Ear, Nose and Throat at the seventieth annual meeting of the Illinois State Medical Society, at Rockford, May 19, 1920.

pictures, claimed by some to be deleterious to ocular hygiene, are of modern-day invention. While eyeglasses have been employed to some extent for centuries, yet every oculist knows that they have only been in common use for little more than a generation.

Man has changed his habits of living in many respects since he was first put upon this footstool. He was doubtless originally intended, largely, as an outdoor individual. Primeval man roamed the woods and prairies and exercised his eyes in pursuit of his livelihood. For many centuries he existed without a written language. He progressed and finally arrived at a point where he pounded out his thoughts on rocks until finally somebody came along and invented the printing press. Since that time the human eye has been put to a strenuous task. Then again many of his species, tired of the exclusiveness of life in the open range and settled themselves in larger communities where the opportunity to exercise their vision was made to limit its functions and provide for the necessities of a changing hour. The modern world is a changing world. Compare even the city and urban population of today and twenty years ago. What a great influx there has been to the cities. While it may be argued that many of those moving to cities came from smaller towns where their eyes were employed in shops, offices, schools and the like, yet when they enter the great cities they must necessarily for the large part count on more strenuous ocular activity and less opportunity to use them for distant vision.

Public schools have increased in number enormously in the past decade or two and many of them are today crowded almost beyond their limit. The present-day course of study, in many instances, requires a certain amount of home study. In addition, many children are given private instruction in music and in art. The college courses of today are such as to require the burning of much midnight oil. While much study and attention has been given to better school illumination, yet the conditions in most educational institutions are yet by no means ideal. There is an opportunity for school officials to do much to prevent ocular deterioration or degeneration by paying more attention to better illumination in the school room, more hygienic arrangements of desks and seats, clearly printed books and a more

carefully selected curriculum which obviates unnecessary study and application.

Working conditions in shops, factories, and offices have improved materially the last ten years. The subject of better hygiene has rightfully been taken up seriously by employers, laboring men's organizations and public officials and, as a result, rooms where men and women workers spend many hours a day, are better lighted and more intelligently ventilated than ever before. Modern systems of lighting, especially the indirect methods of illumination, have greatly aided in the better conserving of human eyesight. Public sentiment and encouragement in the further establishment and maintenance of better lighting systems in all places where many people congregate for work or study should be actively fostered. Since the advent of the motion picture as a common means of pleasure and instruction there has been much discussion on the part of the profession and the laity as to the effect of pictures upon the integrity of the eye. Doubtless the early unsteady flickering cinema operated in the poorly improvised hall did tend to damage the eye somewhat, but any objection to the present highly perfected product of the screen to the properly adapted eye would not seem to have much weight. Subjects who complain of asthenopic symptoms after attendance at motion picture shows can usually be relieved of their symptoms by proper correction of their respective refractive errors. Movie patrons should be taught not to overdo the habit by overindulgence as to frequency of their visits or the length of their stay and should be cautioned not to sit nearer than twenty feet from the screen.

The incidence of myopia is, as every oculist knows, one of the symptoms of ocular deterioration or degeneracy. Fuchs classes near-sightedness as an attribute of culture and all other observers, I believe, agree with him. Schools are the main hot-beds for its propagation. The condition is only exceptionally congenital. Tenner showed as the result of the examination of 4,800 school children under a cycloplegic that only 9 per cent. were myopic at the age of 5 and 48 per cent. at the age of 16 (Fuchs).

Along the same line, J. L. Minor,¹ reporting the results of the examination of white and colored children in the schools of Memphis declares

1. New York Med. Jour., August 3, 1907.

that among the negroes only one in fifteen showed similar weakness. As these children were doing similar work under similar conditions, he assumes that the educated ancestry of the whites was a predisposing cause to visual defects.

To show what can be done to lessen myopic cases, Widmark² reports that in Sweden the proportion of nearsightedness in the schools fell in twenty years following 1880 from between 40 and 50 per cent. to less than 19 per cent. He attributes this to better illumination, better print in school books, diminished study of the dead languages and the development of practical exercise.

The advances made in the study of ophthalmology in modern days have also had much to do in bettering the condition of the eye. The public today is devoting much more attention to the care of their eyes than ever before. Never before have so many people been wearing glasses. This fact may perhaps lead some to believe that ocular degeneracy is on the increase. Never before have so many men been practising ophthalmology and in addition the number of so-called "refracting opticians" has increased largely in number. It all means that there is a much greater demand on the part of the public for better care of the eyes and that the eyes of the present generation are receiving more intelligent attention than have those of any period of our human existence.

Not only in the sphere of ocular refraction has progress been shown. One has but to review the literature on the prevention of blindness of the last twenty or thirty years to digest the statistics that relate to ocular prophylaxis. The decrease in the occurrence of ophthalmia neonatorum with its sequelæ of total or partial blindness has been slow and difficult to attain, but results are beginning to show. The campaigns directed against ocular injuries, waged actively for many years by members of this section and others are beginning to bear fruit. The medical profession, generally, is giving greater consideration to the ocular etiology of certain obscure diseases and symptoms and, as a result, many ocular conditions, which otherwise would remain undiscovered and untreated, are being corrected.

Marked activity has also been shown in the better control of contagious eye diseases. Every-

one is familiar with the spread of trachoma and other ocular diseases in hospitals and public institutions, homes and in armies, in the days gone by. As an example, Keiper³ reports the case of a boy who inoculated 200 children by means of two roller towels. The arduous work of Stucky in treating and educating trachoma patients in the mountain regions of Kentucky and Tennessee comprises one of the greatest and most practical achievements of modern ophthalmology prophylaxis. The noble labors of this observer will bear fruit for generations to come. Such movements tend to conserve the integrity of the human eye and prevent its deterioration.

Advances in the past few years in the diagnosis and treatment of syphilis and tuberculosis are beginning to show themselves in the lessening number and the degree of severity in cases of congenital eye diseases. It is not to be expected by even the most optimistic observers that either of these diseases will ever be banished from the earth, but the knowledge acquired concerning them and the marvelous advance in the education of the public relating to them are certain to have their effect in lessening the number of cases. When this is done, its effect will be demonstrable in fewer cases of degenerative eye diseases.

Recent observations in the etiology of certain eye diseases and their relationship to dental disease made by Allport, Westcott, the writer and others, and the close relationship between ocular maladies and the diseases of the nasal accessory sinuses and infected tonsils have stimulated closer study of ocular diseases and the proper treatment of these conditions has materially reduced the number of eye maladies due to these causes.

Internists and general practitioners are paying more attention to the treatment of the eye in the general management of their cases than ever before and are referring more of their cases to the oculist for advice. As a result, the eye is receiving more attention as a causative factor in general diseases, and also many degenerative eye diseases are discovered in their incipency and early treatment applied, which formerly were allowed to progress to the point where little could be done to benefit them.

It has not been the intent of the writer to correlate all of the advances which have been

2. *Hygiea*, 1909, p. 9.

3. *Jour. Indiana State Med. Assoc.*, 1912.

made in the treatment of the eye diseases during the past fifty or one hundred years, nor to point out or even allude to those measures which have been made to better preserve the integrity of the human eye. Such a task would be well nigh impossible in a paper suitable to be read in this section. He has endeavored only to indicate but briefly some of the things that have been responsible for the deterioration of the human eye in the present and past generations and to some of the measures which have come into being during the same periods which have tended to assist in the prevention of ocular degeneration.

At this point we may ask the question alluded to in our title. The best answer that the writer can make is in the negative. It is his belief that with all the changed conditions of life and the thousands of years of human existence on this earth, with all the abuse that ignorance and carelessness and necessity have allowed or demanded, that the human eye today has degenerated but little during all these ages. Progressive studies in ocular conservation, marked advance in the treatment of ocular conditions by the medical profession, campaigns of education in better ocular hygiene, advanced educational standards in ophthalmology, more advanced scientific achievements in illumination, better general hygiene and a more thorough appreciation of the necessity of general physical well being in its relationship to the eye, have all tended to prevent general degeneration of the eye and to maintain its standard of efficiency. Further advances along these lines will more fully redound to the glory and honor of those working in these fields and tend to conserve the integrity of the organ which furnishes the most beneficent stimulation of the higher sense organs.

DISCUSSION

Dr. A. H. Andrews (Chicago) thought that in the main Dr. Nance's conclusion that the eye is not degenerating is correct. We find many more defective eyes now than we used to find because the eyes are used more and the defects show up. There was a time when we did very little reading and more walking. Now this is reversed. The defects which eyes have are brought into prominence, and it does not follow that they are degenerating.

Dr. Carroll B. Welton (Peoria, Ill.) noted as a fact that we don't find the numbers of fundus lesions that we used to because the general medical man in looking over his cases is better prepared to cope with the general disease, the cleaning up of mouth sepsis, dental

and tonsillar, and otherwise has greatly reduced these eye diseases that we have had. For that reason, he would say the human eye is not degenerating, but is becoming better.

DR. GEO. F. SUKER (Chicago): The question whether the human eye is degenerating or not depends upon the conception of the term degeneration. Economically, no; from the standpoint of disease, no, because the human eye at the present time is of the same form, shape, and matter as it was two thousand or more years ago.

The Egyptian eye was the same as it is today. What has changed since civilization has become more perfect is the pupillary eye distance. It is less today than it was a thousand years ago by fully one-eighth of an inch.

Human nature, that is the construction of the human body, is one of the most adaptable things we know of. As to anatomical changes in the construction of the eye itself, as far as we can judge from mummified specimens, the antero posterior diameter of the eye, the size of the optic nerve, lens and depth of chambers or the insertion of extra ocular muscles have not varied in any way. But there is a change in the placement of the eye in the skull and socket. It is somewhat deeper today than that of the ancient. The distance between the eye and the nose is less than it was a thousand or more years ago.

The eye is not physically or anatomically degenerating. We have a better conservation of energy and take better care of ourselves now than ever before—prevention is the watchword—so also prophylaxis. Therefore, we have as good eyes today as the ancients had. The Chinese had myopia thousands of years ago, and still have more than any other race because of their head formation. Yet we maintain that myopia is an element of civilization. Now, in the Caucasian races myopia actually is a development of their civilization. The aborigines of any race, excepting the Mongolian and American Indian, are not myopic. No animal is myopic by birth. I know this, because I have measured many species of them both dead and alive.

Hirschberg is quite of the opinion that myopia is largely the result of civilization, and I share the same opinion.

I had the opportunity not so very long ago of examining a good many Indians, and did not find myopia among them. Myopia is more a characteristic of the white race than of the negro. In the true blooded negro I never found myopia. Not everybody that is black is a nigger; it takes more than a mere dark skin to make a man a negro.

Therefore, I take issue with Dr. Nance in the question of the degeneration of the eye. Is it degenerating in the sense of more diseases? I say no, as the present day diseases are no different from the ones the ancients had; and, anatomically, I say no, as prehistoric records show this. It is our conception of the interpretation of things and the way we handle our diseases that we might think it is degenerating. Our

eye is structurally the same now as eons of ages back.

You take a thousand Indians, and you will find that their interpupillary distance is a quarter inch more than that of a thousand white men. The lower down the scale of civilization we go the broader is the skull and the greater is the interpupillary distance. Civilization and confinement does enter largely into the confirmation of our physical condition. To regard this as a degeneration would not be logical; rather consider it as an adaptation to environment—an adaptation is not necessarily a degeneration.

Much more could be said to prove that our eye is not degenerating, but the few remarks above made will suffice as a discussion.

DR. OLIVER TYDINGS (Chicago): There is one idea that suggests itself to me, and I think perhaps Dr. Nance did not intend to include that in his paper.

It might be that the tendencies that would lead to degeneration of the eye would be among those that are below the normal standard in point of intelligence. Not necessarily would you find that the eye would be defective because of this degenerative tendency, yet at the same time whenever you take life that leads to degeneration of morals, and so on, you soon bring a status that would certainly lead to degenerative tendencies. And I think that this would apply particularly to the eye and other parts of the body, although some of them have good physical frames.

DR. W. O. NANCE (Chicago): Just a word in closing.

I think that all of those who have discussed the paper have practically agreed with the essayist. The point that Dr. Suker made as to the definition of the word degeneration as included in this subject, I mean entirely in its popular definition.

What suggested itself in the preparation of this paper was the question so popularly and frequently asked of every oculist by some members of the profession and by the laity as well. They frequently say, "What does all this mean, is the human eye deteriorating?"

You go into a school and find probably one child in every three or four wearing glasses. Why do we now have so much eye trouble? Is it because we are rapidly gliding down the scale to deterioration of the whole human subject, or not? No; the point I brought out in the paper, the points I tried to make, were these: The advances made in the study of ophthalmology, the advances made in refraction (I think that the American doctor does the best refraction of any in the world), the study of contagious diseases, studies in the advancement of ocular injuries, the studies made by the oculists and internists in general medicine—these are some of the things that have kept pace with our changed conditions of life, which have necessitated the eyes for closer work, more people living in the cities, more people living in different environment than ever before. All that has a tendency to bring about the deterioration of the eye. Yet the advances have kept pace, better education for care of the eye has kept pace with the changed conditions, and as a result we as a race today are really better off

than our forefathers were hundreds of years ago. That is the point I endeavored to make in the paper.

TROCAR THORACOTOMY VERSUS RIB RESECTION IN ACUTE EMPYEMA*

O. FRANK SHULIAN, M. D., F. A. C. S.

QUINCY, ILL.

The surgical principle "where pus exists, evacuate" is so indelibly impressed upon the mind of the medical student as never to be forgotten, and while applicable in cases of pyothorax, the time and technique for its accomplishment is, as proven during the past four or five years, of paramount importance.

The treatment of empyema should be of special interest since the mobilization of our man power during the world war offered in this respect, as in many others, unequaled opportunity for its study. Even in civil life, empyema has been, because of its association with influenza, more prevalent during the past two or three years than for many a decade.

It is a well recognized fact in the medical profession that the treatment of empyema has not been ideal, and in many instances most unsatisfactory to both patient and physician. Every one who has had experience with this condition will agree that until recently conservative and radical methods of treatment have been most discouraging and not comparable with medical and surgical progress along other lines. No effort, therefore, should be spared to improve our almost lamentable results in the treatment of this disease.

No less an authority than Dr. Samuel Robinson is quoted in a recent text-book on surgery as saying "every pneumothorax is to be laid at the door of the man who does the original operation for empyema." This is sufficient to call to mind the fact that there are two ways of treating this condition, the one of them curing the patient in a relatively short time, the other, in many cases affording temporary, partial relief, but transforming the acute condition into one of chronicity rendering invalidism a certainty and death more than a probability.

The operation of thoracotomy with or without rib resection is only mentioned to be condemned in the light of more modern treatment. It is

*Read at the Seventieth Annual Meeting of the Illinois State Medical Society, at Rockford, May 19, 1920.

associated with gushing out of a litre or more of purulent material, acute torture and alarm of the patient if attempted under local anesthesia when his plural cavity is opened, voluminous, mushy, obnoxious, odorous dressings, requiring changing at least twice daily and frequently oftener for from 30 to 90 days, inevitable pulmonary collapse, with its coincident pressure against and fluttering of the anterior mediastinum, producing a feeling of impending death in the patient, and a sense of fear in the surgeon, deformity and physical incapacity with a constant tendency toward chronicity, and a mortality of 55.5 per cent. as reported by H. B. Phillips et al.

Contrast the above with the clean, sanitary, economical, simple method of trocar thoracotomy as advocated by Arvin E. Mazingo and V. P. Diederich, or the use of the suction apparatus of H. B. Phillips. These offer in addition to absence of shock, cardiac and respiratory embarrassment, secondary infection, and pneumothorax, a greatly reduced period of convalescence and lower mortality, Phillips showing an average of less than ten days in the hospital with a zero mortality. The mortality rate after empyema operations is ordinarily not considered very high, and yet we find that in 299 consecutive cases observed in so excellent an institution as Mount Sinai Hospital during a period of ten years, the mortality reached the formidable figure of 28 per cent.

Willard Bartlett states in his recent text-book, "After Treatment of Surgical Cases," the evacuation of pus collection in many parts of the body is a matter of drainage and that is all, since soft parts allow the early collapse of the ordinary cavity wall with consequent obliteration of the dead space." There are two physical reasons why this happy end is not readily attained after liberation of pus from the pleural cavity; viz: 1. Rigidity of the chest wall. 2. The tendency of the lung to shrink up with every inspiratory effort. The one an anatomical, the other a physiologic consideration, must be fully grasped before any operation is attempted, since a proper understanding of them alone leads to immediate success in this field, while any other course means in many cases ultimate chronic pneumothorax.

We have, then, before us a double indication, the liberation of accumulated exudate, as well

as the inflation and restoration of the compressed lung to the extent that it shall completely fill out the affected pleural cavity. It is a too little known axiom in surgery of the chest that an opening in the chest wall smaller than the interior of the larynx is a *sine qua non*, as every inspiratory effort causes the lung to inflate rather than collapse.

When the pleural cavity is opened for drainage of pus by any other than an occlusive method, the negative pressure is immediately changed to atmospheric pressure (15 pounds to the square inch) the elastic lung collapses if not held by adhesions as pointed out by Alexis Moschowitz, circulatory and respiratory embarrassment is increased instead of improved, and a condition ensues which is the very thing to be avoided. We add to instead of ameliorating the condition.

It is almost a foregone conclusion that every pyothorax treated by the open thoracotomy will be followed by secondary infection, and as secondary infection is one of the principal factors contributing to high mortality, any method decreasing this possibility should be the one of choice. Numerous bacteriologic examinations in cases treated by the occlusive method of Phillips, Diederich and Mazingo show the superiority of this over the open method on account of the prevention of secondary infection, with its taxation upon an already greatly lowered resistance.

O'Day demonstrated that the normal lung may be kept in a state of collapse for months without losing a particle of elasticity. This is not true, however, of an infected or inflamed lung for an inflammation or infectious process with its inevitable exudate, infiltrate and subsequent fibrosis, if allowed its way, ties the lung from within and so thickens its cortex that re-expansion will never again meet the confines of the required respiratory excursion.

Moschowitz in his masterly review of the Surgical Treatment of Empyema, favors simple intercostal incision after the visceral pleura becomes adherent and the danger of pulmonary collapse becomes a negligible factor. Why defer interference when once the presence of a purulent exudate has been diagnosed and pulmonary collapse can be avoided by simple trocar thoracotomy, supplemented by the induction of negative pressure with an almost certain escape from

pneumothorax? Since we cannot accurately determine how early adhesions occur, and knowing delay in evacuating pus is conducive to absorption and consequent toxemia, why court these hazards and jeopardize the patient's life? Even a bilateral pyothorax or a unilateral associated with a pneumonic process on the same or opposite side is no contraindication. An expedient exists in trocar thoracotomy.

I fully agree with Emil Beck in his conclusion "that a compressed inflamed lung when suddenly mobilized by the withdrawal of fluid from the pleural cavity, aggravates the condition." It was my misfortune on two occasions to witness this sequence in two cases, tragedies which I now believe could have been averted by the less radical trocar thoracotomy with gradual evacuations of the exudate and maintenance of negative pressure.

Rib resection as stated by Emil Beck "although not very extensive, opens a sufficiently large wound surface for secondary infection and absorption of bacteria. This is not entirely theoretical. It has been proved in a number of cases where blood cultures were negative prior to operation and positive twenty-four hours following." In trocar thoracotomy little, if any, wound surface exists, and so tightly do the soft tissues hug the cannula or catheter as to make chances for absorption practically nil.

The average mortality in rib resection resection reported from the various army camps was 30.2 per cent. Many reported 45 and 60 per cent. and one reported the staggering figure of 84 per cent. in 85 cases. In a recent personal communication, Phillips reports 100 cases treated by his method in which there were not ten who were not cured in less than three weeks.

As stated by Arvin E. Mazingo, "whether or not the high mortality is due to the virulence of the infection or treatment, it is evident that there are great possibilities for improvement in methods of treatment."

Throughout all the struggle to succeed against empyema ravages, every one knew that the principle to be sought after was a continuous drainage with negative pressure in the pleural cavity. At Camp Mills the mortality ran as high as 55.5 per cent. treated by the open method. Those that recovered drained for 60 days in many instances. (Mix). The indications for the most successful treatment of this condition are obvious; the establishment of adequate drainage coincident with the exclusion of atmospheric pressure.

The particular method with which the writer has had most experience is a modification of that advocated by Victor P. Diederich, U. S. A. Briefly the routine has been as follows:

1. Obtain a definite idea as to the extent and character of the pyothorax by means of stereoscopic x-ray pictures.

2. Trocar thoracotomy under 5 per cent. procain solution preferably near the anterior axillary line to avoid the heavy muscles of the back and thereby reducing discomfort and pain caused by the tube and dressings. A small skin incision is made at least one inch below the intercostal space to be punctured, and the specially devised trocar of Diederich or Phillips introduced, passing external to and upward over the edge of the rib avoiding the intercostal vessels, then through the intercostal muscles and parietal pleura into the pleural cavity. A Dakin tube clamped at the outer end and carried in the extra arm of the cannula, is forced into the pleural cavity and the trocar withdrawn. The tube is secured to the skin by means of adhesive tape, a small pad of sterile gauze being interposed between the skin wound and the tape.

3. Aspiration and irrigation of the pleural cavity with normal saline solution. If cough does not ensue, Dakin's solution is used and repeated six to eight times in twenty-four hours. About 30 c. c. of fluid is allowed to remain in the cavity after the irrigating fluid returns clear. Both Diederich and Moschowitz advocate using saline solution first because of the occasional existence of a pulmonary fistula connecting the pleural cavity with a bronchiole. Obviously this contraindicates irrigating with any solution. It is quite essential in irrigating to be cautious, guarding against air being either sucked in through the tube or injected by the irrigating syringe. Irrigating with moderate pressure

RELATIVE EFFECTIVENESS OF THREE METHODS OF TREATMENT

	Intercostal Drainage	Rib-Resection Drainage	Phillips Apparatus
Days to produce a complete expanded lung	50 days	40 days	3 days
Average day of complete stoppage of drainage	42nd day	28th day	15th day
Percentage mortality in straight forward empyema	30%	9%	0%

when the cavity is completely filled, in addition to removing shreds of necrotic membrane, has a tendency to prevent walling off of small pockets before the entire cavity is sterilized.

4. The routine use of blow bottles is encouraged because it favors lung expansion. This is not as essential in cases treated by the Phillips suction apparatus.

5. If negative smears and cultures are obtained on two successive days after Dakin's solution has been omitted for eight hours, 30 c. c. of a twenty-four hour old 2 per cent. formaldehyde in glycerine is injected into the cavity as used by A. E. Mazingo at Walter Reed Hospital. The Dakin tube is withdrawn and the thoracotomy wound allowed to close. Formerly the sinus was partly or completely excised and a few stitches introduced, but since incising the skin and superficial fascia at a point below the interspace to be punctured by the trocar, this has not been found necessary, the wound closing very promptly because of the retraction of the superficial structures to their normal place.

Eighteen cases thus treated spent an average of 16 days in the hospital, suffering comparatively little pain, having an average dressing cost of \$4.50 as compared to one of \$35.00 to \$60.00 in rib resection cases treated in the same institutions, escaping deformity and the memory of having had a gaping, discharging wound in the thorax. Two in this group reopened after sterilization of the cavity were reported by the laboratory, one responded immediately after using Beck's Bismuth paste, the other has had two injections to date with fair prospects of early closure.

In the writer's judgment the technique advised by H. B. Phillips supplementing trocar thoracotomy with suction by means of his ingenious apparatus, by which he maintains a constant negative pressure of from 30 to 60 m. m. of mercury, should be adopted. If followed by irrigation and concluded after sterilization is accomplished by injecting formalized glycerine, it offers the ideal method of combating this formidable condition. Resorting to the fluoroscope and roentgenograms prior to and following thoracotomy cannot be too forcibly emphasized, for many suspected cases of pyothorax are found to exist where one or more diagnostic punctures fail to make the revelation.

CONCLUSIONS

Trocar thoracotomy with establishment of negative pressure, irrigation with Dakin's solution, plus sterilization of the cavity by formalized glycerine should be the accepted method of treating acute pyothorax because:

1. It can be performed without shock and pulmonary collapse.
2. General anesthesia is unnecessary.
3. The possibility of secondary infection is reduced to a minimum.
4. Accidents, complications and sequelae, as hemorrhages, rib necrosis, chronic sinuses, etc., while possible, are not probable.
5. Expansion of collapsed lung is greatly facilitated instead of being retarded.
6. Less pain and discomfort, immediate and remote.
7. Great decrease in size and number of dressings, with consequent economy.
8. Period of invalidism reduced at least one third.
9. Almost imperceptible scar with no deformity.
10. Applicable in bilateral pyothorax.
11. Pneumothorax preventable and egress of pus facilitated.

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DISCUSSION (ABSTRACT)

Dr. Eisendrath (Chicago) endorsed fully what Dr. Shulian has said. The experience in all of the army camps was that the mortality was sixty to seventy per cent in the acute cases when they tried to do the old-fashioned rib resection operation. As soon as they began to understand that these cases, whether they were due to the pneumococcus or to the streptococcus hemolyticus, could be reduced in mortality, as was our experience at Camp Custer, to five per cent, by using the principles brought out by Dr. Shulian, it was a complete eye-opener to the men who had thought that there was no other way except what they had had in civil practice of immediately doing a rib resection as soon as they found pus.

In every case, when a patient had pneumonia, x-rays

were taken at intervals of five days, and if there was any evidence of fluid the patient was put into the fluid ward, as we called it, the special ward for that purpose, and the fluid was aspirated at intervals of two to three days. As soon as the fluid showed a seventy-five per cent pus, the patient was transferred to the empyema ward for the treatment. It was found that it was seldom if ever necessary to do any radical procedure until the pus became thick enough.

At some camps they found that this trocar method relieved them. We ourselves did not have this experience. We found if we waited until the pus was of that percentage, that simple thoracotomy, sometimes later on rib resection, reduced the mortality far beyond anything we had ever known before.

Dr. Hollowbush (Rock Island) thought the treatment of empyema depends upon the micro-organisms; in the old form of empyema treated in civil life for so many years, the treatment by trocar method may suffice, incision between the ribs and good drainage is sufficient, but in the type of empyema that we had in the service, produced by the streptococcus hemolyticus, that treatment will not succeed in any percentage of cases whatsoever. The reason is that in the empyema produced by it you have an early sacculization of the pleura that becomes very thick, and nothing will do until you get your hand in and break down all the adhesions and sacculizations between the parietes and pleura. You want to make a good, big incision. You want to take out two to three inches of the ribs in order to get your fingers in and expose the pleural cavity.

Dr. Strouse (Chicago) subscribed strongly to Dr. Shulian's discussion of his thoracotomy.

In civil practice, you will find more empyemas in children than in adults, and in the last eight or ten years at the Children's Hospital he had never resected a rib in a child.

We simply freeze the skin with ethylchloride and plunge a double-edged knife between the ribs. We have a metal tube about the size of my small finger with a flange on the end that is pushed in between the rib, and that is all we do. Our mortality has been practically nil. Occasionally, after a case has stopped draining for a while, there will be a flare of temperature. Then we fleuroscope the patient, and we may find a small sacculization—a little localized abscess within the pleura.

Now, the closed method that Dr. Shulian spoke about I believe is an improvement over this, in the cases which have been very acute, in which you aspirate for a while and then do your thoracotomy, but the simple inserting of this tube which does not allow compression and gives you constant drainage has been very effective. We have tried irrigation, we have tried suction, and we have found that all of these give no better results than this simple method which takes one minute to do, produces no shock and gives a mortality that is practically nil.

Dr. Sala (Rock Island) quoted Lilienthal to the effect that it doesn't make any difference about the collapse of a lung, unless you enter both sides of the

chest. He thought it was necessary in all cases of empyema to effect a cure.

The type of cases that the doctor is speaking of and the ones we are trying to discuss are two different types of cases. In the acute cases, while they still have pneumonia, he believes simply aspirating little at a time until the stage where you can do a resection safely is the proper procedure.

Dr. Windmueller (Woodstock) said that in the empyema in private practice ordinarily we could almost guarantee a cure after rib resection, but the type we saw in the army was entirely different.

A meeting of the medical and surgical services at Camp Sherman determined that if they were operated on before they were entirely over their pneumonia they were pretty sure to die. We also determined that a patient who was almost over his pneumonia and was aspirated always had a relapse, and so we decided that we wouldn't operate until we were absolutely certain that they were entirely recovered from their pneumonia.

As to the mortality, we can't judge entirely by your procedure, either, because when the epidemic first strikes a camp, the types are more violent. After a while it becomes attenuated and the cases are a great deal milder. At our hospital in France, we used entirely the rib resection method, and we had a mortality, I think, of 11.5 per cent. They were all done under local anesthesia.

Dr. O'Byrne (Chicago) emphasized what Dr. Strouse said about the resection in a child. It should never be done in a child. It is absolutely wrong in principle. There is plenty of room for drainage between the ribs.

Dr. Oren (Lewistown) stated that excision of a rib in the majority of cases was an unnecessary mutilation, and he related an experience of over thirty years ago. The patient, six miles out in the country, a boy between fifteen and sixteen, was relieved for a time by trocar and rubber tube drainage. Later improvement ceased, and it was necessary to enlarge the opening, introduce a finger into the chest cavity and dig out chunks of cheesy pus.

Dr. Harger (Chicago) thought the discussion showed agreement that drainage is necessary and that the simplest and best way to get the pus, of course, is the thing. Experience in the County Hospital and in private work shows that the cases are not all alike, regardless of the type of infection, and that you can't law down a hard and fast rule and say that cases must be treated so and so.

It is essential to classify types of empyema, types of individuals with empyema, and types of treatment in those cases; then you have something tangible.

Dr. Miller (Peoria) emphasized that a large collection of fluid in the pleural cavity, whether serous or purulent, should be removed by the fractional method. He had a case of edema of the lungs end fatally within two hours after the removal of a large quantity, about 1,500 c.c. of fluid, and he knew of several other cases in which a similar result followed the sudden removal of a large quantity of fluid.

Not over 500 c.c. should be removed at a time

Then, after an interval of twelve hours, another portion of the fluid should be removed, so that at the end of thirty-six or forty-eight hours, the chest is empty and the lung may gradually expand, thus avoiding a very great danger of edema of the lungs which will follow where the fluid is removed at one sitting. After the fluid is removed, then the suction may be begun, and the lung gradually expanded and pulled out against the chest wall.

Dr. Carter (Mattoon) thought the most important phase of this subject was the type of infection present. In some of these cases, simple drainage is sufficient. In one case drained by the periodic method of aspiration, with only partial relief, he made a rib resection and found a deposit on the parietal side of the thoracic wall, a quarter of an inch thick or more, which he peeled off with his finger and pulled out in chunks very much like coagulated milk on the side of a jar.

In another case he made a resection of a rib, found an accumulation very much like the mother of vinegar, and with forceps pulled a handful out in one deposit hanging in the opening.

There is no one rule that is going to fit all of these cases. There is just as much difference in the type of infection in the lung cavity as there is in the types of infection in any other part of the body.

DR. SHULIAN: Since this paper brought out such an energetic discussion, I am very sorry that I didn't have time enough allotted to me to get to the real essence of my paper. In answering some of the criticisms with reference to aspiration, and not being able to locate pus, it is very necessary that stereoscopic x-ray plates be made of your suspected cases, because in many cases where a diagnostic puncture is attempted two or three times and fails to make any revelations, stereoscopic x-ray will show you where the pus is located.

With reference to the x-ray of cheesy or shredded material, the method that I was going to conclude my paper with is reference to the Phillips Suction Apparatus supplemented with irrigation of Dakin solution. That in eighteen of my cases has proven most successful.

As far as statistics are concerned, when a group of cases are tried out, some with intercostal incision, some with rib resection, and some with Phillips Suction Apparatus, and you find such a decided improvement with suction apparatus supplemented with irrigation, you cannot help but feel at least enthusiastic about it.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION MEETING

October 26-27-28, 1920

CONGRESS HOTEL, CHICAGO

The preliminary program of the forthcoming meeting of this old association has been issued. It shows that the next meeting will be one of the most interesting in the history of the organization. Among the addresses will be one by the President which will deal with general topics relating to the profession.

The address on Surgery by Dr. Charles H. Mayo, of Rochester, will deal with the surgical treatment of digestive ulcer.

The address on Medicine by Dr. Henry A. Christian will deal with a live topic, "Cooperation for Medical Men."

There will be two leading symposia: one on the primary anemias which will be discussed by Charles P. Emerson from the internist standpoint.

Willis D. Gatch will deal with the surgical aspects and Virgil H. Moon will deal with the pathology.

A symposium on "Disorders of Internal Secretions" will be presented by Cannon, Tierney, Bandler, Hoxie and Draper.

SAFEGUARD THE WATER SUPPLY

Instances of infection from polluted water supplies are happily growing fewer every year, due chiefly to the taking of greater precautions against the spread of contamination and disease. There is still, however, much room for improvement.

The oldest form of water purification is, of course, simple filtration through filter beds of sand or gravel. In some regions where the watershed is exceptionally free of loose matter and not easily subject to contamination, this is sufficient for the production of good water. In the majority of cases, however, the water contains organisms that pass freely through a sand filtration or brings down so much sediment that the proper working of the filter is interfered with, so that it is the best practice to supplement filtration with some form of chemical treatment. This is always the case when the watershed is situated in a thickly peopled region easily subject to pollution.

The chemicals most commonly used are alum and chlorine. Alum has the property of rapidly precipitating all suspended and semi-soluble matter in the water. As the suspended matter has considerable affinity for the organic matter which causes pollution, the use of alum also greatly reduces the number of bacteria in the water. The effectiveness of alum may be judged from the fact that as little as one or two grains is sufficient to precipitate the sediment in most waters. The object of the chlorine is to sterilize the water as a further precaution against bacteria.

The cost of chemical treatment is so little—hardly a fraction of a cent per gallon of water—that it is not to be considered in connection with a service that affects the health of the community to such an extent that its adequacy is measured in terms of death rate.

To some the use of chemicals in drinking water is, at first, distasteful. It must be realized, however, that fecal matter and the germs of disease present in untreated water are in themselves chemical substances. By chemical treatment we substitute for these deadly organisms the purifying reagents which destroy them.

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Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

OCTOBER, 1920

Editorial

COST OF PRINT PAPER UP FOUR HUNDRED PER CENT.

We have frequently called attention to the continuing increasing cost of getting out the ILLINOIS MEDICAL JOURNAL. We have asked re-

peatedly for co-operation on the part of the members of the State Society to help keep down the expense of getting out the official publication. The costs of labor and material are going up by leaps and bounds. To illustrate the difficulties that confront us we show the cost of print paper before the war and since, as follows:

Prior to the great war newspaper print paper bought under contract cost less than \$40.00 per ton delivered. During the first six months, 1920, August and September, the price was \$117.00. We are informed that during October, November and December, paper cannot be had, under contract, for less than \$138.00 per ton delivered, or a little more than three and a half times the pre-war price.

The JOURNAL buys paper under contract, ordering some time in advance. We are reliably informed that publishers who have failed to have contracts filled on scheduled time and who have been compelled to get a supply in the open market from brokers, have been obliged to pay at least \$250.00 per ton and in many instances \$300.00 per ton.

According to best information available there will be no reduction in the price of paper for some time; on the contrary, further advances may occur next year.

During the period of rising paper costs wages have increased by leaps and bounds and other expenses connected with getting out the JOURNAL have soared proportionately. The total of all advances are enormous.

SEND ON THE NEWS.

We are anxious to have the medical news of the State for publication each month in the JOURNAL. Marriages, Deaths, the removal of Physicians from one address to another, the election of officers to County Societies are items that should be forwarded promptly. Members of the Society seem to forget that the JOURNAL is the official organ of the State Society; that each member owns as much of the JOURNAL as his fellow member. They fail also to remember that what they get out of the JOURNAL is what they put into it.

So far we have received comparatively little assistance from members of the Society. We would like a variety of expression from the members rather than being obliged to accept

several articles each from a comparatively few physicians.

Doctor, you should take a lively interest in your own medical JOURNAL, remember it is trying to help solve your problem. Read every copy carefully and if you have something for the next or succeeding issue, don't fail to send it in at once. We want you to take active interest in the JOURNAL. We want to serve you and we want you to help us serve the other fellow.

LABOR HAS NOT ENDORSED HEALTH INSURANCE

At the twentieth annual meeting of the National Civic Federation at Hotel Astor, New York City, January 30, 1920, James W. Sullivan of the American Federation of Labor, chairman of the Civic Federation's committee on foreign inquiry, authorized by Railway Brotherhood and A. F. of L. executives to act as the Trade Union member of the committee on foreign inquiries of the Social Insurance Department of the National Civic Federation, after reviewing the history of the various attempts since 1905 to commit the American Federation of Labor to adopt resolutions in favor of Social Health Insurance said in conclusion:

The promotion of state legislation relative to sickness insurance has been undertaken by several state Federations of Labor or by labor delegates in such Federations. In the forty-eight states of the Union the legislatures have in general taken no action, after the years of agitation for the project. The outcome of state commissions appointed on the subjects have been favorable to compulsory sickness insurance in New Jersey and Ohio, and unfavorable in Connecticut, Wisconsin and Illinois. One year a commission in Massachusetts was in favor, and the next year another commission was opposed. Two commissions in California supported a proposition to amend the state constitution to permit compulsory health insurance, but a vote at the polls on the question resulted in nearly three to one against. As a general fact it may be said that in most of the states labor has shown faint interest in the question, while in the half dozen where it has come to public discussion compulsory insurance has not been energetically supported by organized labor.

In the State of New York in the last few years a health insurance bill has been introduced at each annual session of the Legislature, each bill after the first differing in important respects from those preceding it. There have been changes with regard to the occupations to be included under the proposed

law, and numerous alterations in the details for carrying out the law. Aside from the general question of advocating or opposing working-class sickness insurance, the argument necessarily shifts with each year and the new phases of the project appearing in the inconsistent bills before the Legislature. Two years ago in February, 1918, a conference of the New York State Federation of Labor, about 200 delegates present, indorsed a health insurance bill drafted by its committee on health in conjunction with its executive council. It came to be known as the "Nicol Bill."

The interested citizen who reads the Mills Bill of four years ago, the Nicol Bill, the Davenport Bill and the Graves Bill, noting the progressive variation in provisions proposed by the advocates of compulsory sickness insurance, will ask if it is by any means a certainty that those advocates have as yet arrived at conclusions clear to themselves, whether as to principles or details of their measures. Whoever reads these bills, and acquaints himself with the run of comment, political or otherwise, on them and their subject, must speedily see that sickness insurance takes but a subordinate place in a health program which in its scope shall look to prevention first and foremost and then to methods in treatment of disease and then to social means of meeting wage losses. The state may justly carry out measures intended to protect all its citizens alike against the various menaces to health and to control treatment of the sick. In the matter of meeting wage losses, the state may be expected to supervise associations for the purpose, and supply the machinery for such supervision. How much farther should it go? The trade unionist stops to reflect when in theory he is brought to the line which sets the wage-workers aside as wards of the state, as subjects of special regulation, and as material for a social machinery run by state officials.

In looking to Europe for light on the subject it is a question as to how much of profit may be found in the experience of that other world where the wage-working class has been, in opportunity, rate of wages, education and qualifications for citizenship, in a different situation from the wage-workers of America. What has Europe to teach the United States with respect to sickness insurance? To reply to this query implies a heavy and serious task if one is to go into the details of the various systems in different countries. An enduring obstacles in the way of ascertaining the facts is the difference between the populations and governments in European countries as well as the differences between Europe and America. Various systems have been developed. Compulsory sickness insurance systems are by no means so prevalent in Europe as the supporters of the principle in this country would have us believe. The fact is noteworthy that change is continually going on in the methods of administering foreign systems, while the systems themselves are not permanent. There are systems which are mere paper, other sys-

tems meant to encourage voluntary health insurance, others in which there is compulsion only for a few classifications of wage-workers, and finally a few systems which aim to be inclusive of the working-class population. Sweden and Switzerland are at the present time on the point of changing their systems. France seems to be more than ever in a mood to maintain its usual method, voluntary in all but a few specially dangerous occupations. The situation in Great Britain with regard to sickness insurance has been dealt with by another member of this committee.

The first point in judging as to the outcome of the system of any foreign country is whether the facts in regard to it have any relation to the facts of our American society. Following that point the necessities of the case require a series of conclusions as to one or another feature of the various systems which in the end might have little practical application here.

Sickness insurance! What is to be insured? What is sickness? Who is sick? Who is to decide when one is sick? Who is to say when one's sickness is his own fault? Who is to determine justly many questions in the matter of sickness? To what degree is sickness a mere matter of the mind? People of robust mentality ignore the aches and pains which frighten timid people. One's habitual attitude toward sickness counts for much. Some have doctoring habit, some the patent medicine habit, some the habit of ignoring what sends other people to bed. Under any form of sickness insurance, voluntary or compulsory, a certain proportion of the members of any group would quickly develop the habit, to be indulged in to the maximum degree, of being "on the funds." Among men and women whose social education has been obtained in this country, the majority would surely to-day avoid asking for sickness insurance benefits as they avoid taking unearned money in any form. What would be the effect in this respect after a decade of such a sickness insurance law as that of Great Britain? Character corrupting habits inevitably spread on opportunity. To reject what another man continually takes requires the stoicism of a strong nature. Expectations of what the State may do for one can be made to replace resolutions to do all that is possible for one's self. The trade union principle has been to contend for individual rights in facing the employer and with regard to the community and to resent unjustifiable interference by either.

A fair statement of the present attitude of organized labor is that, in the case of sickness insurance, as with respect to many other propositions, it refuses to take a plunge in support of a project which is part of the program of Socialism. Nor is it prepared to support without careful scrutiny measures drawn up by associations not in its membership; it will not approve of any law which will tend to break down its own systems of mutual assistance; it regards the degree to which the interposition of the State shall extend as a matter to be settled in favor of the

principle of liberty of the individual; it resents an indiscriminate classification of wage-earners as objects of public relief; it looks to wider measures than sickness insurance in the social campaign for the reduction of the death rate, the prevention of sickness, the improvement of public methods of caring for the sick and finally for the general sharing of the burdens of sickness.

SAMUEL GOMPERS AGAIN GOES ON RECORD AS OPPOSED TO COMPULSORY HEALTH INSURANCE

In an address before the annual meeting of the National Civic Federation, held at Hotel Astor, New York City, January 30, 1920, Mr. Gompers said:

I just want to take up a part of your time to say a word or two upon this subject of compulsory health insurance. I was a bit surprised to hear the statement made by Senator Davenport that if this matter, the subject of compulsory health insurance, should be thoroughly discussed and it be proven to be impractical, then that nobody would want it. I venture to say that there is quite a group of people in the State of New York and in other states that, no matter how convincing would be the proof that it is impractical and impossible and, instead of being beneficial, prejudicial, would not be changed in the slightest, and they would still want it, not necessarily for themselves, but for the masses of labor. There are some people of which this group is a part that, if you present facts to confute their position, they will answer in point of controversy, "So much the worse for the facts."

It is not a question of the purpose of the proposition. We should have for any proposal a good purpose but the most important thing is the result. And has compulsory health insurance where employed produced the results that we should adopt? That is the thing. Is the health condition, is preventive work, better in other countries than ours? Surely we have not attained the acme of perfection. Is the length of life of the people of other countries greater than the length of life of the people of the United States? Statistics can demonstrate that easily. I can understand how we may have privately conducted membership in voluntary health insurance, and there are not in all the world so many people who have insured themselves voluntarily and co-operatively as among the people of the United States, but even if it were State health insurance, with all the other good or best provisions in the bills before the various legislatures of the State of New York and of other states, if they were of a voluntary character scarcely any one would interpose objection. But bear this in mind, that once compulsory health insurance is enacted into law in the State of New York, no matter how wrong it may be to any individual or many of the individuals, you cannot escape

it. You have got to remain a member of that compulsory insurance under the law. No matter what grave injustice may have been done, you cannot get out except you move to another State, and we are not all of us prepared to move from the State of New York. If the health insurance is to be conducted by the State, then let it be of a voluntary character, and every man or woman who desires to come under the provisions of the insurance law of a voluntary character in the State of New York, he or she may join, and come under its provisions, and if any injustice, if a great wrong is done to an individual or to a group of people or to numbers of people, they can then resign from it and be free. The question is, after all, which is best. No one will dispute the fact that out of our wonderful progress industrially and commercially and in transportation, the ills of modern industry are terrible. The injury of the workers in modern industry and transportation is terrible, but there is an old saying in our language that often the cure prescribed is worse than the disease.

I should want the people of our country to have the very best conditions and standards, and the labor movement has done more than any other group or any other agency in our country to bring, first, prevention, second, insurance, and thus provide a large mass of the workers with those things sought to be accomplished through State agency. The organization of labor of which I am a member, and have been a member for many years, has this statistic—this data to its credit. Before 1886 the members of my craft worked any hours—any hours. There was established a law in that organization, adopted by the membership, that eight hours were to constitute a day's work. In connection with the organization, a death benefit established. That is, in the event of the death of a member, a certain amount of money should be paid his widow, his family, his dependents. Sick benefit was provided, but I want to refer to this particular benefit, the benefit in case of death, because that is the exact data upon which will depend the statement that I am about to make to you. As a consequence of the death benefit it was necessary for the claimant to present to the local union of which she or he was immediately a member, the health certificate and the paper showing the time when the deceased was born and the time that he died. These were official certificates, authenticated then by the Board of Health or the Mortuary Board of the locality and sent in to the general office of that organization. There could be no collusion between the health officers and the mortuary officers or the officers of the local union and the claimants to those benefits. And within a period of ten years the records showed that the average length of life of the membership of that organization had increased more than fifteen years, the longevity of the members of that craft had increased more than fifteen years. The length of life of the wives of the members, for whom also if they died was paid a burial benefit, had

lengthened over ten years. The sick benefits for which we provided showed a falling off of the amount paid in proportion as the hours of labor were reduced, bringing better standards of life, giving more leisure, more opportunity for decent homes, or rather, better homes, better and more nutritious food, the opportunity for leisure and recreation. This all brought sickness prevention, and the health insurance was in the form of the organization. Now, what is true of the organization to which I owe my primary membership in the labor movement is equally true, more or less, of every other bona fide labor organization of America.

So far as I am concerned, all these great sums of money which have been referred to and which have been quoted here—if they brought about the desired result without greater injury—would prove no obstacle on my part to my favoring the proposals. To me the matter is far deeper and more fundamental. I have said time and again that I will take second position to no man in America in my veneration for the spirit and the institutions and the ideals of the Republic of the United States. And yet I am opposed to giving even our great Government additional powers over the lives and the normal activities of our people. You give government authority to determine as to whether any worker is entitled to the benefit under such a compulsory health insurance law, and I assure you it will take jurisdiction and exercise power. We have lived as a nation for over a hundred and forty years. The people lived in the Colonies a few hundred years before that period. As a nation we have grown wonderfully, in numbers, in territory, in wealth, in industry, in commerce, in science, and in all the attributes that make up a great people, and we have lived upon the foundation of freedom and the ideal of liberty. We have blundered in many things. In what group would there be no blunders? Who is infallible as an individual? No one claims that for himself or herself in the United States. There is one great personage in the world who has the attribute of infallibility. We are not He. The fallibility of man finds its manifestations in groups and finds its expression even in a country. I am of the opinion that in considering these experiments with the humans formed into a society, into a state, into a country, with its power, not only judicial, not only legislative, and executive, but with the armed force of the country or of the state, that when it comes to matters of this character, we should bear in mind that we are human and have all the frailties of humanity and that frequently that frailty and weakness are exaggerated when we organize as a group or as a country.

I was astonished when I heard Senator Davenport speak of the compulsory health insurance as a tendency to bring employer and employee together. How? Where? By what process of reasoning would that be brought about? The establishment to which he referred, the Johnson establishment, is not compulsory. That is not administered by the law of the

State. That is administered somehow by the employers and probably some of the employees. And, as the Senator said, this establishment and the men "beat the union to it." I don't know in which respect except the one he mentioned. I would like to know something about the wages and the hours and the standards of life and labor which are in that establishment. It is all very good to provide sickness insurance, but how about the wages sufficient to fill the needs of the family budget? And not only that. As far as I am concerned, I protest against the concept that all that should be paid to a man in the form of wages is enough to allow him to fill the stomachs of himself and his dependents until the wages have been expended. A man needs something more. The wage-workers, whether men or women, are entitled to something more for the great service they are rendering to society, and service without which progress and civilization would come to a standstill and perish. The workers of our country and of our time are deserving of something more. But even I would like to know something of the wages and hours of labor and conditions of employment in that establishment before I will consent to say "Amen," that the people over at the Johnson establishment have "beaten the trade unions, the labor union, to it."

I may say this, of course the subject is a very broad one. It is largely speculative except from the fundamental principles involved, to which I have tried to refer. But I do want to take occasion just now to say that it has come to me that recently some person has declared that Gompers has been won over to compulsory health insurance. I have already made my answer, which is that I am unalterably opposed to it.

MANUFACTURERS AND MERCHANTS OF NEW YORK CONDEMN HEALTH INSURANCE

THE SECRETARY OF THE ASSOCIATION SEVERELY
CASTIGATES SENATOR DAVENPORT, SPONSOR
FOR THE DAVENPORT-DONOHUE BILL

DEALING IN GLITTERING GENERALITIES IS TYPICAL OF THE ATTITUDE OF MOST OF THE
PROponents OF COMPULSORY
HEALTH INSURANCE

I MEAN THE MERCENARIES, THE MERCENARY
PROPAGANDISTS, THOSE WHO LIVE BY IT
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FALSEHOODS OF THE PROPAGANDISTS
OF COMPULSORY HEALTH
INSURANCE

Mark A. Daly, secretary, Associated Manufacturers and Merchants, New York State, in an

address at the annual meeting of the National Civic Federation, New York, January 30, 1920, takes Senator Davenport severely to task and presents practical arguments which the dream book artists who advocate health insurance will find it impossible to controvert.

Mr. Daly said:

I am particularly glad of this opportunity to give you a few facts, as I view them, in connection with compulsory health insurance, or in connection with compulsory health insurance as evidenced by such bills as have been introduced in New York State.

We have come to look on Senator Davenport as really the chief proponent for compulsory health insurance in this State, and this morning he made what I consider some pleasing generalities in connection with a big topic. The meat of his speech, as I understood it, was that somewhere, indefinitely, there is a problem, and that he thought he had a remedy for it, that remedy being the bill introduced last year.

Another of the chief points of the Senator was that a very considerable hullabaloo had been made about the attitude of the employer in connection with the cost of this insurance, and that it was all bosh. Well, now, that is typically typical of the attitude of most of the proponents of compulsory health insurance—dealing in glittering generalities.

I want to say a word about what I consider the attitude of the employer—and I think I know. In the first place, Senator Davenport made the statement that vested interests, and so on, object to this legislation because they pay for it. That is a fallacy—an absolute, utter fallacy. They don't pay for it, and any business man with an ounce of common sense knows they do not pay for it. You pay for it, you public. You pay for it, and it is good business, and you ought to pay for it, because you are responsible for the need, not the business men. Business men don't admit they are responsible, save possibly in a remote way, for the illness of the worker, aside, of course, from the occupational diseases which Mr. Belmont enumerates; nor do they admit the illness of the worker should be a charge against industry. Now, that doesn't mean, of course, that the employer does not know that perhaps there is a problem of illness, that perhaps it does occasion much suffering and so on; but it is not his belief that industry as such should pay for it, nor that the public through industry should pay for it, because the economic limit has almost been reached through which industry can pass on to the public those burdens of questionable merit which a great many honest, well-meaning people have shunted off and laid upon the State under the guise of social welfare.

As I understand it, Senator Davenport's argument was that because this problem was somewhere extant, and because it should be met in some way, that the thing to do was to hit the most available head, which is the head of industry; therefore, industry must assume the executive and administrative duties of running a great machine. I must not talk too long, so I

will try to give you one illustration to show the fallacy of such reasoning as Senator Davenport indulged in a few minutes ago.

Last June the Associated Industries, which I represent, which is probably the largest State association of manufacturers in the country, felt that there possibly might be something to all this potter that has been stirred up in connection with the problem of sickness and the payment of benefits for sickness and sickness prevention, and with the experience of several previous years, beginning with the Mills Bill in 1915 or 1916, and so on up to the Davenport-Donohue Bill, it was very evident that the burden to be shouldered in connection with this problem was to be put upon industry. So industry wanted to know just exactly where it stood, and if there really was a reason why this burden should be put upon it. Not the financial burden—I am not talking about that. I am talking about the practical burden of administration, because, after all is said and done, under the Davenport Bill, all the bookkeeping is done by the employer and doctor. The rest of it, payment of benefits, etc., is a mere matter of detail. But the bookkeeping we do, all the collection of the funds—the real burden, by the way, which Senator Davenport forgot to mention—and we pay the cost of clerical help for that work, we check up absentees and things of that sort.

So a number of our people, individual firms and corporations, determined to inquire into the percentage of illness among workers, that we might know the truth ourselves. I have here the record for the first three months, July, August and September, covering three hundred firms, employing a total number of 131,146 employees (these figures being subject to revision upon further check), and all these records were substantially by personal investigation, regardless of cost. We did not take the word of the men or the women as to the reason for their absence, but employed special investigators, and when the employee was away from the plant more than two days, the investigator immediately went to his or her house, made inquiry into the cause of absence and reported back to his plant. In the three months, with this coverage of one hundred and thirty-one thousand people, odd, the total number of absentees for all causes was 9,973, or seven and six-tenths per cent of the total employed. Mind, that is absent from all causes. Of this absenteeism there were 4,250 employees absent because of illness, or 3.2 per cent. 3.2 per cent! Mark that! That is very significant, very astounding. I'll wager Dr. Hoffman won't believe it. The number absent through accident was 580, or .4 of one per cent. The number absent for personal reasons, such as fishing, papering the spare room, and so on, is 5,143, or 3.9 per cent—greater than the percentage absent for illness.

Now, then, the days lost through illness were 43,899½ days; through accident, 5,433½ days, and for personal reasons, 41,015½ days. I want to get this into the record as a sort of preliminary statement, and that is why I want to read these figures.

The hours lost for illness were 336,468½ hours; for accident, 47,788; for personal reasons, 357,931½.

The value of time lost through illness is \$138,816.83.

Does that mean anything to you? Do you sense the tremendous significance of that many dollars wage loss when taken in connection with the number of people covered by this inquiry? These figures mean that the average wage loss in industry, due to sickness, for each three months, is a little less than \$1.06 per workman. Multiply that by four and you have an annual wage loss, if these figures are correct, and I believe they are, of \$4.24 per workman. Contrast that figure, that \$4.24 annually, with the figures which are part of the propaganda of proponents for compulsory health insurance. These proponents declare that every workman in industry loses nine days per year through sickness, or approximately \$36, at a very conservative estimate.

The claim of proponents of compulsory health insurance is that poverty is a direct result of sickness; that workmen cannot afford to pay for a doctor's case or for necessary medicines, etc. Does it seem possible that the statement is true, in the face of the figures I have just quoted to you? Would you think it necessary to expend hundreds of millions of dollars annually to make up a wage loss of \$4.24 a year—one day's pay? Would you say that the self-respecting, independent workman of this State of New York, the man able to earn \$8 to \$12 or \$15 per day, would become a party to foisting upon the State this thinly disguised form of poor relief?

Do you know that the average wage in New York State, for males and females, is approximately \$26 per week? It's the truth. These figures are given out by the State Industrial Commission. In November the average weekly earnings of factory employees were \$25.37; in December the average weekly earnings were \$26.32. I'll predict that the month of January will show a further increase in average earnings.

These figures represent an increase of 4 per cent in November and 3 per cent in December. They represent an increase in wages of 107 per cent since June, 1914. I make these points concerning wages merely to show you the class of people that Senator Davenport would legislate into pauperism. He would begin—would try out his theories—on a portion of the population than whom none other is more able to care for itself. He would make of this measure rankly class legislation, to care for 3.2 per cent of the factory workers of this State, each one of whom, averaged, earns more than \$26 per week, and each one of whom, averaged, loses \$4.24 per year through illness. And the cesspools of the State, the unfortunates and the victims of heredity, who might possibly furnish an excuse for this class of legislation but are excluded from participation in it, go by the board as negligible, as not worthy of consideration at this time.

I might state, in passing, that these figures I have given you, the figures collected by the Associated Industries on absenteeism, have been turned over to the Chief Statistician of the State of New York, Mr.

Leonard W. Hatch, of the Bureau of Statistics of the State Industrial Commission, who will check them up and eventually report his own unbiased and non-partisan deductions therefrom. *I believe these figures will show such astounding facts that they will forever put the quietus on many of the palpably false statements and some of the half-truths of the propagandists for compulsory health insurance. I mean the mercenaries, the mercenary propagandists, those who live by it.*

Everybody, I presume, will admit that if the percentage of illness were anything like what the proponents of compulsory health insurance say it is, some infinitely drastic means should be taken immediately to repair some of it, at least.

But compulsory health insurance has had an experience only in two countries, England and Germany, that is, for all practical purposes. Dr. Hoffman has just brought back facts about the English experience, and we have plenty of statistical data in connection with the German experience. I will admit that if there possibly could be any good, anything humanitarian, in compulsory health insurance, it might easily show itself in England or Germany, where the wages of workers range from 100 to 450 per cent less than the average wage paid the workers in New York State. It might be possible that compulsory health insurance was a necessity where the workers were ground into the dust, if you want to call it that—where they were unquestionably underpaid. But whether it is a necessity in the United States, for self-respecting, independent, honest and hard-working and revenue getting employees is another matter. I think you will all agree to it.

Now, one of the things that Professor Davenport said was in connection with the number of people needing medical attention. According to these figures on abstenteeism, 55.8 per cent of this general average were attended by a physician, and 44.1 were not attended by a physician. But there were only 881 major illnesses in this experience, or 20.7 per cent, while the bulk of the illnesses were minor illnesses, 3,369, or 79.2 per cent.

It may surprise some of you to know that out of the approximately 10,000 people absent from all causes in this survey, 2,882 carry one type of insurance, either life, health, accident, benevolent, or fraternal; that 1,043 carried two types of insurance; that 195 carried three types of insurance; that 130 carried four types of insurance, and 39 carried all five types of insurance. So it looks as if, perhaps, the workers were able to take care of themselves a bit.

Now, the Senator sneered, I think you could call it that, at the matter of cost of this Act, and before I close I want to say just a few words concerning that cost. It is comparatively easy for people in the Senator's position—before I go into this cost I want to just take you all into my confidence a little. I was up in Albany last winter when this bill was up,

and this just struck me suddenly, because the Senator said that, as I understood him, one of the reasons why he was fathering this sort of legislation was his general love for humanity, and the reason he introduced this bill was chiefly to get it before the public so it could be very generally discussed, and the right thing produced in the end. Well, now, how many of you know the method that the Senator took to produce the right thing? How much humanitarianism and how much good faith—I wish he had not gone—and how much good faith is evidenced by the action of Senator Davenport with this bill, which, as he told you, passed the Senate—yes, passed it because of a plain, flat political job? That is all. As a portion of a political deal. Not, mind you, with any reference to its merits, or to its necessity, and with entire disregard of the tremendous cost of it. This burden. As a necessary component part of a political job it was put through the Senate. Now, I saw it done. I will tell you just exactly how it was done. It takes 26 votes in the New York State Senate to pass a bill. There were 22 Democrats in the Senate last year and the remainder were Republicans. The majority of the Republicans was four, which is close enough—I think Senator Walters, the majority leader, will say it is too close. In that Senate were Senators George F. Thompson, J. S. Fowler and Ross Graves, the latter from Erie County, Thompson from Niagara County and Fowler from Chautauqua, and Senator Frederick M. Davenport of Oneida, the introducer of this bill. Senator Thompson had a particularly pet measure which he desired to pass. Likewise Senator Fowler and Senator Graves. Senator Davenport had the Compulsory Health Insurance Bill. I will let it go without any further comment. He had it. The majority of the Senate, for reasons best known to itself, didn't care to have the bills of Senator Thompson, Senator Fowler and Senator Graves reported from committee, nor did the Senate believe that compulsory health insurance should be reported from committee or should be foisted on the State. But through some hook or crook Governor Smith had been made a proponent of compulsory health insurance, and Governor Smith brought pressure to bear upon the Democratic minority which, without the formality of caucus, agreed tacitly to support compulsory health insurance as a part of the Governor's program. I personally know at least two Democratic Senators who do not believe in compulsory health insurance and who would not have voted for it last year—or, at least, they so told me,—if it were not for the fact that they were reasonably certain it would be killed elsewhere. That Democratic minority, as I say, joined with Senators Davenport, Graves, Thompson and Fowler, and transformed the minority into the majority for the purpose of passing four bills which each one of these four insurgent Senators desired personally. Now, there were other votes for compulsory health insurance, Senators Burling, Baumes and Lockwood. I guess

that is all. No, Thompson, G. L. Thompson of Suffolk, voted for it. But they voted for it only because it had already been passed by this minority-majority. That is a good way to put it. This intermingling of Republicans and Democrats to create a majority of the Senate.

Now, Senator Davenport was a party to that. Senator Davenport went into that deal with his eyes open. Was that square to this State? Was that a reasonable assurance that Senator Davenport wanted this matter of compulsory health insurance fairly and honestly and equitably discussed, so that an honest conclusion might be reached? Is that the way to get an honest conclusion? No.

Now, what did that juggling mean to this State? Senator Davenport says that all this "twaddle" about the cost of it is mere bosh. Well, perhaps it is. But on the basis of Senator Davenport's bill, which provides that not less than 5,000 persons shall be members of any one fund, and because the Davenport bill as originally introduced covered 8,925,000 persons, the mere cost of administration alone is a staggering item. The original bill, in my judgment, is the only bill that possibly could be construed as having any humanitarian aspect; and after all Senator Davenport's dickering amendments to gain support for his bill by the elimination of the opposition of this one and that one and the other one, all there was left of the bill was the theory and the cost. I presume Senator Davenport will claim that these amendments are the result of "constructive criticism." Here is the way it was arrived at: Senator So-and-So probably would say to Senator Davenport, "My people are against this provision; you cannot have my vote if that remains in the bill." Senator Davenport probably would say, "My dear Senator, we will strike it out," and it was struck out. And so, in the last analysis, nothing was left. Why, the bill covered 8,925,000 people in January and 3,100,000 in March. Now, what happened to that 5,000,000 in the interim? Were they any less worthy of the help of this "humanitarian" measure in March than they were in January? You know this is all hodge-podge. It is ridiculous! They cut out in four amendments everybody who by any stretch of imagination or by any logic could be within the purview of this act. And they left in just exactly the people who do not want it—the people Mr. Gompers represents. You, Mr. Gompers, and your fellows, can earn your own money. And you can do it honestly and independently and righteously, and we can help you do it. But you don't want a wet-nurse to aid you or them. So, as I say, the only basis upon which you can reckon the cost of this health insurance bill is on the basis of the first bill.

I make the statement now, without fear of successful contradiction, that for medical benefits and cash benefits, medical supplies, and so forth, under this bill, the cost would be not one penny less than \$125,000,000 annually. That is a sort of mean average between the estimate of the Superintendent of In-

surance, Mr. Jesse Phillips, who declares it will cost \$106,000,000 annually, and the estimate of one set of our own actuaries, who said it would cost \$92,000,000, and the estimate of another set of our own actuaries, who declared it would cost \$136,000,000; and that is as close as anybody ever got to the cost of it. But the most conservative estimate was \$92,000,000—I mean the most conservative estimate of any opponent. The proponents say it will cost 24 cents a week.

Now, then, after you get all through paying those things, you start something else. You start the administrative cost, the dollar that you spend to set up your organization, to do business. On the basis of the first bill, there would be 892 funds. That is permitting 10,000 people to a fund, not 5,000 people, as this bill provides, and as you know, in any political measure where it says, "At least 5,000," it might just as well say, "At most 5,000," because that means so many more jobs in the hopper. We will say that to do the business of 10,000 people, one fund could get along with 25 persons. It couldn't, but we will say it could—conservative estimate. That means 22,300 persons as the minimum required force for the administration of this act alone. Twenty-two thousand three hundred persons. If I could run that organization for my own political benefit I think I would be a factor in the politics of this State.

Now, State salaries as a rule are higher than the average. Say we paid \$900 a year to the clerks, stenographers, etc. It isn't enough ultraconservative—but say we pay \$900 a year, general average, per person, for these people. Twenty-two thousand three hundred of them! What do we get? We get an annual payroll of \$20,070,000. Twenty million seventy thousand dollars! This is a law that doesn't cost anything. The cost is a mere nothing, an argument of the opponents made merely to cast discredit on it! Twenty million dollars! There is your start of administrative expense.

Now, you can't put 22,000 out in the street, can you? You have to house them somewhere, place them. You have to give them offices and typewriters, supplies, and so on. Better than that, you must furnish for every one of these funds a medical director. Don't forget that! That means 892 medical directors. Now, could any self-respectful State ask a medical director to work for less than \$5,000 a year? Give up his practice? He must be a good doctor to be the head of a medical fund, take care of 10,000 people, and so on. All right. Five thousand dollars a year he gets, which would mean a little item of \$4,460,000 for expense of medical directors.

Every political fund must have a manager. In this State it would. We have 892 funds; that means 892 managers. And it would be a disgraceful State that would not pay \$2,500, at least, to a manager. What does that mean? Well, that means a little item of \$2,230,000 a year for managers' salaries.

Now, this wonderful institution which Senator Davenport spoke about, this board of directors was immediately to set up an industrial democracy, to be

the intermediary between the employer and the employee. Why, all joking aside, that is one of the chief fallacies of the proponents of this measure. You know this whole propaganda was built on just such half-truths as that. Compulsory health insurance never would have been an issue in this State if it had not been for these half-lies. There is a modicum of truth in it, of course. You set up a board of directors, three employers, three employees, and one chosen by them as the—arbitrator, I believe he might be called. Arbitrator. Well, how much power has that board got to be a real institution? Let us look up the bill a minute. Section 54 says: "No fund shall begin business until it is approved by the Industrial Commission. The constitution of a fund and any amendments thereto which may thereafter be proposed shall contain such provisions as the Industrial Commission may direct, and shall be put into operation only upon being adopted by the members of the fund and upon being approved by the Commission."

It is plain "bunk." There is only one power in a fund and that is the commission. The board of directors is just exactly as we know some other boards of directors to be, a sort of sleeping sickness. However, no self-respecting board of directors could fail to draw its pay, and they are allowed \$5 per meeting under this act. They would meet at least once a week. In plain justice to their job they would be obliged to meet that often. I won't hazard a guess as to how often they would meet if they were political appointees, but if they were decent, honest, upstanding directors, they would have to meet at least once a week to look after the business of those 10,000 people. Now, if they did that, and if each got \$5 a meeting, and each fund had seven of them—you are dealing in big things—the annual payroll would be \$1,623,440.

Say you pay \$100 a month for each office as rent. That is \$1,200 a year, which is \$1,070,400, annually, as the rent item.

Give them each two typewriting machines for 25 persons. Those would cost \$178,400. The office furniture, allowing \$500 for the furniture for each fund, to take care of the desks and filing cabinets, and chairs for 25 persons, would mean an expense of \$446,000, and the postage and incidental expenses, allowing \$3 per week per fund for general postage, and one letter per year per member—that is a good average, I think—would mean an annual expense of \$214,472.

The expense of a compulsory health insurance law is exaggerated, Senator Davenport says!

If you paid \$75 a year per fund for telephone, you have an annual cost of \$66,900.

Just for the administrative cost, on the basis of these ridiculously low estimates, we have the trifling annual expense of \$30,641,092 for the administrative cost, which I recapitulate as follows:

892 funds @ 25 employees each equals 22,300 employees.	
7 directors each fund, one meeting each week.	
at \$5 each, 52 meetings @ \$35 each, X 892	
funds	\$ 1,623,440
892 medical directors @ \$5,000 per year each	4,460,000

892 managers @ \$2,500 each per year.....	2,230,000
892 funds, 25 employees each, at average of \$900 each per year.....	20,070,000
Furniture and equipment (\$500 each fund; 892 funds)	446,000
Office supplies (892 funds @ \$300 per year each)	267,600
Rent of offices (892 funds @ \$100 per month each, or \$1,300 per year).....	1,070,400
892 funds, two typewriting machines each, at \$100 each	178,400
Postage (892 funds @ 5,000 members each, equals 4,460,000 members @ .02c. each per year, and average of \$3 per week for regular office postage)	228,352
Telephones (892 funds @ \$75 per year each)	66,900

Grand total\$30,641,092

Senator Davenport declares that there is a problem to be solved—a somewhat intangible and nebulous problem. We must make a start somewhere, so let us spend \$125,000,000 in the first instance, and more than thirty and a half millions more to administer it, and then, if we find out after a couple of years that there really isn't any problem and we have spent our hundreds of millions on demand of a few dreamers who didn't know what they were talking about, we can repeal the law and everything will be all right. Now that is the perfectly ridiculous—if not worse—attitude that most of the proponents of this compulsory health insurance assume.

I say there isn't any problem. Of course, there is sickness. But I do say, too, that every fair-minded employer—and there are a lot more of them than many of the proponents of compulsory health insurance would lead you to believe—that many of these employers, I say, are just as economically wise, we will say, as are the proponents of compulsory health insurance. And the majority of them, if it can be shown them that a contribution for illness or an aid given to an employee to assist himself to sick benefits, if it can be proved that that will bring the employer and the employee any closer together, any nearer to that old day when the employer worked side by side with his employe at the bench, then I assure you that there is no question but that the advanced employers, and that means 95 per cent of them in this State, will do everything in their power to set up this relation on a practical, businesslike basis, with some possibility of its being a success. When people tell you that employers are interested in this merely because of the cost aspect, I want you to know that it is not true; that they are interested primarily because they know the public is bearing all the burden that the public can stand, and because of the larger vision, if you want to call it that, the wider perspective and the more practical experience of the men who are the heads of businesses in this State. They know the thing that thousands of other people, whose ears are not so close to the ground, do not know—that the economic limit is reached, and that we are facing the time when, if any more is added to production costs and is passed on to the consumer, the public won't buy, the employer cannot manufacture goods to put in storage, and, consequently, the workman won't have a job.

DR. NORMAN BRIDGE MAKES AN ADDITIONAL HUNDRED THOUSAND DOLLAR ENDOWMENT.

THE CALIFORNIA INSTITUTE OF TECHNOLOGY TO GET BIG GIFT.

The following reached us as we go to press:

PASADENA, Sept. 22.—Another gift of \$100,000 to California Institute of Technology from Dr. Norman Bridge of Los Angeles was announced here today by Arthur H. Fleming, chairman of the board of trustees.

This gift follows a recent gift of \$150,000 made by Dr. Bridge to the institute, formerly known as Throop College of Technology. The new physical laboratory building at the college, upon which work is to start in two weeks, will be called the Norman Bridge laboratory, in honor of Dr. Bridge.

THE MARCHING YEARS. By Norman Bridge, M.D., A.M., LL.D., New York. Duffield & Company. Price, \$2.50.

This work gives the life history of the author. Dr. Bridge's rise to fame and fortune is a counterpart of the story of the Aladdin Lamp, in other words, it is an Aladdin Lamp story in reality.

When 45 years of age, because of a severe physical indisposition, the author was obliged to leave Chicago. He settled in Pasadena, California, where he regained his health. He was equally fortunate in being able to accumulate a fabulous fortune. He is no doubt the richest medical man in America, if not in the entire world.

The life story of this good man shows that he has been of the world, as well as in it. He has been a great factor in making medical history. There are thousands of physicians in Chicago, Illinois, and throughout the United States, who will never forget Dr. Norman Bridge, who held, for many years, the chair of Practice of Medicine in Rush Medical College, for he taught them. The echoes of his eloquent voice are still fresh in their memories. They remember him as a vast encyclopedia of medical knowledge and one of the greatest teachers of his time. None have forgotten his quaint mannerisms, his charming personality and lovable and kindly disposition.

Many volumes have come from the pen of Dr. Bridge, and this work, although written at 75 years of age, has all the fire of youth.

It is unusual for a reviewer to become so immersed in a volume of this size (292 pages) that he reads it from cover to cover at one sitting, only interrupted by necessities. That was my fortunate experience.

The reason is patent, for the book is a biography of the author, written in the inimitable style that only those readers can appreciate who have

read and treasured his previous volumes. It satisfies the ambition of the average physician to acquire an extensive remunerative practice in his chosen specialty. A smaller number find their aspirations satisfied with molding and influencing the development of the practice of medicine in a large way as professors in our leading colleges. To a smaller number still it is vouchsafed to stand forth pre-eminent in the civic and educational fields of large cities. When to all these many-sided accomplishments are added the taste and ability to be a patron of the fine arts, music and archæology, and a financier of vision and success, surely such a career bespeaks the superior man.

And the wonder of it all is that the doctor was practically a self-made man in the way of conventional education, though he attributes to the little New England home, and especially to his mother, the impetus that carried him through ill health to distinction.

The removal to a prairie farm in Illinois and the life there during his youth and the humble, but necessary, duties that devolved upon him are quaintly narrated with an appealing humor.

The deft character studies of the faculty members he came in contact with as a student and later as an instructor and professor are gems in a way, though each reader may have favorites that he would like to see added to the list or more fully described. Thus, Dr. J. Adams Allen, perennial "uncle" to generations of Rush students, is only briefly mentioned. Throughout the book the beauty of friendship appeals to the author, who makes frequent references to his great indebtedness to friends and his discussion of the subject in a special chapter is a classic.

The chapters on "Indispensable Study" (dissection), "Teaching Medicine," "Courts and Doctors," "Hospitals," and others will make a strong appeal to the medical profession, and we hope to reproduce parts of them in future issues.

In a work of such uniform excellence and accuracy, it is perhaps ungracious to point out a place where "Homer nods," but the author attributed a quotation from "The Height of the Ridiculous," by Dr. Oliver Wendell Holmes, to a "forgotten somebody." Fie, fie, doctor. The "Genial Autocrat" was your very prototype!

However abstruse his subject, always the doctor clarifies and embellishes it with the flowers of fantasy.

After many years in California, he changed his legal residence to Chicago in 1916, for the reason that, under the laws of California, it is impossible for one to make a legal will giving more than one-third of his gross estate to institutions. But his friends will hope that he may be spared for years to bring forth the treasures of his "manuscript drawer" from time to time.

Cui benefactor erit?

THE MEDICO ECONOMIC ALIGNMENT
IN THE UNITED STATES IS FUNDAMENTALLY AMERICANISM AGAINST
BOLSHEVISM, ECONOMY AGAINST
WASTE, ORDER AGAINST CHAOS, LAW
AGAINST LICENSE, RIGHT AGAINST
WRONG.

It is an old saying that men are wise if they are wise in time. Paternalism was the curse of Germany and ultimately brought about its downfall. Bolshevism and extreme Socialism have ruined Russia. Experience in these countries should teach America how not to go. It is part of social wisdom to erect breakwaters which will deflect erring current into socially useful channels. The principles of justice, personal freedom, of natural rights and duties must furnish the materials for an effective breakwater against the devastating currents of paternalism and bolshevism in America. The less compulsion the people of the United States are obliged to submit to the better for the future welfare of the country.

Unless the drift towards bureaucratic government is stopped Americans will be the most ruled and standardized people in the world, and we will need armies of citizens to enforce all the laws; by and by we will all be government employes, earning our pay by watching one another; then surely the millenium of the dream book artists will have been reached.

BOLSHEVISM AND HYPOCRISY SYNONOMOUS

A bunch of parlor bolshevists in this country are trying to spread Russian propaganda and attempting to set up in the United States a form of soviet government. We have confidence in the average American's foresight and hope that no great numbers will be deluded by the hypocrisy of the crowd that are fostering this destructive propaganda. After the glowing promises made to the Russian proletariat by the advocates of communism and the subsequent betrayal of the rank and file by the leaders, the simple-minded people of this country should profit by the experience of the peasants of Russia.

Recent history shows that the most significant development in the Russian situation has been the complete failure of the Bolshevik or communist idea. The leaders themselves now admit that their suggestions for reforms have not secured the measure of control they had promised.

Trotsky and Lenine now realize their failure and have turned their backs on their old plans and schemes with a cold-bloodedness that is appalling.

Very recently Trotsky made a speech in the course of which he positively stated that the only salvation of Russia lies in the centralization of power vested in a strong government. The Lenine-Trotsky regime now admit the failure of an industrial system that eliminates expert executive direction.

Experience has proven to them that human inequalities cannot be adjusted by governmental fiat and that human failings cannot be cured by persuasion or cajolery. They have therefore changed fronts, issued an order directing an industrial mobilization according to the rules and regulations that govern the bringing together of military power. Foxy old Trotsky has boldly proclaimed the necessity for this in words that sound exceedingly strange when coming from the mouth of the supposedly high priest of the proletariat. We quote him as follows:

"Mobilization is more necessary now than it was formerly, because we have to deal with the present population and masses of unskilled labor which cannot be utilized to the fullest extent by any other means than military discipline. Trade unions are capable of organizing great masses of qualified workers, but 30 per cent. of the people cannot be reached by this means."

Is anything further needed to convince the unsophisticated of the hypocrisy of the whole Russian propaganda? To meet the situation he has created a working army, built upon iron military discipline in the enforcement of compulsory work for all. Thus has the disillusionment of the Russian masses become complete. Instead of a life of comparative idleness, luxury and ease, such as they had been expecting when "sovietism or communism" came into power, they are now made subject to the whims of a new and more calloused autocracy. Even with compulsory labor as a recognized institution, the only thing that can be said of it by its own proponents is that it falls far short of the results obtained under our American industrial system founded upon individual initiative and competition.

Because of propagandized efforts that are being made to enact laws of a compulsory character in this country (not the least offensive of which is Compulsory Health Insurance) the facts enumer-

ated should prove a warning to all Americans and more particularly to the workingmen among whom radical agitators are trying to spread Bolshevik propaganda. What sovietism, communism, proletarianism, bolshevism, extreme socialism, etc., has meant for Russia has been compulsory work under military dictation.

We hope that American men and women who are being told that the establishment of a bolshevik form of government in this country will be the quickest way to industrial freedom should see for themselves that the establishment of any of the rules advocated is the surest road to enslavement of the people.

Again we say that European experience should prove a shining light to show the world how not to go.

THE NUMERICAL STRENGTH OF THE MEDICAL PROFESSION

ORGANIZED MEDICINE SHOULD WIELD TREMENDOUS INFLUENCE IN CIVIC AFFAIRS

Doctors of medicine represent the largest single group of professional men in the country. There are about 150,000 graduate physicians in the United States, of whom 140,000 are believed to be in active practice.

The American Medical Directory lists 147,812 names and indicates that physicians are located throughout the country as follows:

State	Number
Alabama	2,530
Arizona	333
Arkansas	2,587
California	5,929
Colorado	1,713
Connecticut	1,701
Delaware	264
District of Columbia	1,237
Florida	1,296
Georgia	3,442
Idaho	458
Illinois	11,095
Indiana	4,765
Iowa	4,004
Kansas	2,668
Kentucky	3,483
Louisiana	2,060
Maine	1,179
Maryland	2,268
Massachusetts	5,926
Michigan	4,598
Minnesota	2,596
Mississippi	1,975
Missouri	6,063
Montana	661
Nebraska	1,960
Nevada	159
New Hampshire	666
New Jersey	3,153
New Mexico	456

New York	15,877
North Carolina	2,257
North Dakota	604
Ohio	8,089
Oklahoma	2,672
Oregon	1,157
Pennsylvania	11,495
Rhode Island	762
South Carolina	1,433
South Dakota	695
Tennessee	3,481
Texas	6,246
Utah	488
Vermont	653
Virginia	2,552
Washington	1,698
West Virginia	1,759
Wisconsin	2,817
Wyoming	254
Medical officers U. S. Army and Navy (1918)	1,638

A physician reaches in the course of the year practically every home in the United States. As moulders of public opinion the medical profession can exert an influence that is not approached by any other profession or trade because they are closer to the hearts of the people than any other body of men.

As an advertising medium the influence of the profession has been in a large measure overlooked by the commercial industries of the country.

The doctor wields a large influence in the selections of foods, clothing, house furnishings and equipment and other things which affect health, sanitation and comfort. For this reason the farsighted manufacturer seeks to obtain the support of the medical men both through advertising and through personal contact at conventions, and through detail men who call personally on the individual doctor.

ANOTHER MEDICAL MARTYR.

"Our hearts are sad as word comes of the sudden death of Dr. C. F. J. Laase from heart failure. Only last month we had the pleasure of congratulating Dr. Laase on the outcome of his recent trial for alleged violation of the Harrison Narcotic Law.

For a long time Dr. Laase had been a student of narcotic drug addiction. The exigencies of practice brought several cases to his attention that specially interested him, and he early realized that narcotic drug addiction was something more than a morbid habit, or an abnormal craving for certain drugs. The more he observed the phenomena presented by the patients under his care, the more convinced he became of the soundness of Dr. E. S. Bishop's contention that the so-called craving for the drug of addiction has its origin in a true pathologic condition; in other words, that the "prolonged use of narcotic drugs produces a disease condition as definite and typical in its character and manifestations as any other mor-

bid state." Dr. Laase, in addition to his clinical investigations, gave much attention to the literature of the subject, and the many translations he made of articles by European students of the problem have proven exceedingly helpful. Only a few months ago *American Medicine* was privileged to print his excellent translation of Valenti's valuable contribution to the study of drug addiction.

Earnest, thoughtful and imbued with the courage of his convictions, it was to be expected that Dr. Laase would not hesitate to criticize and condemn whatever he saw in the narcotic laws, or their regulations, that seemed unwise and unjust. He never thought of himself, or of the antagonisms he might arouse. He expressed his honest opinions openly and fearlessly, and "let the chips fall where they would." His attitude toward health insurance was equally outspoken. To him, the various schemes tending toward state medicine presented the greatest danger to the medical profession. He would have been false to every principle he held dear if he had not come out "into the open" and done his part to awaken the profession to what he considered wrong, and a great menace to the welfare of American medical men.

How far Dr. Laase's open criticism of certain phases of the narcotic laws, and his active opposition to the proposed plans to establish health insurance in New York State, were responsible for the accusations which led to his indictment for alleged violation of the narcotic drug laws, we are not prepared to state. Dr. Laase himself, and many of his immediate associates, felt certain that he was the victim of malice and persecution. He had abundant evidence that left no doubt, in his mind, at least, that certain medical men had gone to unbelievable extremes to injure and ruin him. Had he lived and gained his strength we understand it was Dr. Laase's intention to submit the evidence he had accumulated to the County Medical Society and demand an investigation of the acts of the physicians whom he claimed had persecuted him and been guilty of the grossest of unprofessional conduct. Dr. Laase was quoted as wanting the American people to know the lengths some of his professional brethren had gone to, to ruin him, solely because he had actively and openly opposed their views and plans.

Unquestionably, therefore, the one thing that was most responsible for his mental and physical depression and weakness was his constant brooding on the grievous wrong he had suffered at the hands of members of his own profession. It was inconceivable to him that physicians looked on as leaders in the profession, men of standing and reputation, could not only want to see him ruined, crushed and made an outcast, but would privately and secretly resort to every possible means to bring this about—solely because he had dared to oppose their plans and purposes.

Dr. Laase, as those who knew him best, well know, could not hate anyone or wish to see anyone suffer. The knowledge that there were men—physicians—who had hated him so much that they had used every means in their power to ruin him, was a

terrible blow. And when, after his trial was over and he came through that ordeal with every right to expect the hearty commendation and good will of every honorable physician, he found that the same forces were no less anxious to destroy him, "by hook or by crook," the situation was not one calculated to give him the cheer and encouragement he so naturally needed to help him regain his mental and physical balance.

It is no exaggeration to state, therefore, that Dr. Laase was a true medical martyr. He dared to stand by his honest convictions and fight for what he thought was right. It is not for us to say how far his enemies went to make him pay for his temerity and courage. We do not know the means they took or the methods employed. But Dr. Laase knew, and possibly there are some of his immediate associates who do. We earnestly believe it was the mental and spiritual hurt caused by his knowledge of what he had suffered from sources he had never thought of as seeking to injure him that was largely responsible for his death.

"Man's inhumanity to man" is a sad arraignment of human nature, but if the anguish and trouble Dr. Laase was needlessly caused to go through was the result of professional animus, what an indictment could be drawn of the workings of medical enmity.—*American Medicine*, September, 1920.

SYMPOSIUM OF THE NURSING PROBLEM BEFORE THE CHICAGO MEDICAL SOCIETY, MAY 12, 1920, WITH

PAPERS BY DOCTORS CHARLES E. HUMISTON, EDWARD H. OCHSNER AND M. L. HARRIS, WITH REMARKS BY THE PRESIDENT OF THE SOCIETY, DR. J. V. FOWLER. DISCUSSED BY FRANCIS W. SHEPHERDSON AND DR. ROBERTSON.

CHICAGO MEDICAL SOCIETY.

PRESIDENT FOWLER in opening the meeting said: The settlement of this question of nursing will devolve largely upon the medical profession. The nurse is an adjunct to the medical man in the treatment of diseases, and she is now becoming a necessary and almost indispensable adjunct, but the physician of all men has the best understanding of the situation.

It was about two years ago when we began to realize the shortage of nurses during the first influenza epidemic. Conditions were bad at that time. Many of us attributed the shortage of nurses to the war, and to the fact that so many nurses were engaged in war services of one kind or another. It was our hope that after the war was over and the nurses had returned conditions

would revert back to normal. But they did not. During the second epidemic of this year conditions were almost indescribable, as you all know. There was a shortage of nurses everywhere. They could scarcely be obtained for home nursing. There was a shortage of nurses in the hospitals. Some of the hospitals had even closed some of their wards because of the lack of nurses to take care of the sick. But even today, when the health of the community you might say is at its best, we are suffering from a shortage of nurses.

Today I called up a number of hospitals to determine the actual conditions, and it may be interesting to you to hear some of the replies that I received. One of the smaller hospitals needs forty-five nurses for patients, but now has thirty, a percentage of 66.2. There has not been an application for seven months. Another hospital that requires forty-five nurses now has twenty-six. There are six nurses in the probation class. Another hospital, of the moderate size, having a three years' course, said they had plenty of nurses. Another, and a comparatively large hospital, reported that they needed eighty nurses, but only had a percentage of seventy-five. There are three in this year's class. Another hospital which requires seventy nurses has thirty-four. One of the large hospitals reported they had all the nurses that they need and plenty of applications. However, this is one of a group of larger hotels that pool their interests, have raised a fund, and are carrying on an educational campaign in the various high schools of the country to get nurses, so that if they have a sufficient number I do not see the need for the campaign.

This is simply an illustration of the conditions that exist, and we find that the applications are becoming fewer and fewer, so that it will only be a comparatively short period of time, if these conditions continue, when we will not have any pupil nurses in the hospitals at all. As it is, they are calling in graduate nurses to take the places of and do the work that should be done by the pupil nurses. It is an added expense to the sick, and this thing should not continue.

It is a serious question, one that we must settle one way or another. This meeting is called with the idea of getting constructive ideas, to find out what can be done with the situation. It is evident that the medical profession, the

Illinois State Medical Society, and the Chicago Medical Society are of the opinion that by lowering the standard of entrance requirements, by shortening the course, it would do some good; consequently, at the last session of the legislature a law was passed changing the conditions somewhat. One of those who had a great deal to do with the passage of that act we have as a speaker tonight, and so I have the pleasure of introducing to you, Dr. Charles E. Humiston, who will speak on "The Nursing Situation as Affected by the Recent Opinion of the Attorney-General."

DR. CHARLES E. HUMISTON: The rulings of the attorney-general of Illinois, which will be the subject of the few remarks that I shall make this evening are printed in full in the ILLINOIS MEDICAL JOURNAL, but there has been such delay in issuing that journal that I doubt if many of you have received it.

I find it extremely difficult to condense what the attorney-general has said in the matter, as it is a direct application, and is an attempt at an impartial review and interpretation of the present law.

The Illinois Nursing Act of 1913, under which we worked until last July, and under which to a great extent are still working, had certain provisions in it which have been the subject of considerable controversy. Most of us did not realize that these bones of contention had been removed by the Nursing Act of 1919. It took me some time to realize that, and I daresay many of the rest of you are of the same mind. Some of these points will develop as we proceed. A protest was filed on February 24 of this year with the Director of Registration and Education by Dr. M. L. Harris, representing the Illinois Hospital Association, the Illinois State Medical Society, the Chicago Medical Society, and the City Health Department. The specific grounds of protest were that the Department of Registration and Education was illegally establishing rules for hospitals and training schools and claiming that it had the law for so doing; that the Department was ignoring all officers and directors of hospitals in correspondence with the training school, and was naming qualifications, number of instructors and also the number of patients which a hospital must have in order to be on the accredited list; likewise fixing the requirements for admission to training schools and establishing a curriculum for training

schools. All these things were being done irregularly and in accordance with the act of 1913. The Committee on Nursing had formulated these rules, many of them, and they were being enforced in the regulation of hospitals before the Civil Administrative Code came into being or the Department of Registration and Education had been worked out. The Department inherited this law and these rules. So the first thing that strikes one in reading this opinion is that the rules considered most arbitrary, oppressive and ill-advised, were all taken away by the passage of the new law. There seems to remain very few powers and prerogatives to the Department. One of them is to hold examinations for applicants for registered nurses; another is to issue certificates of registration; a third to inspect approved hospitals for nursing, and fourth, to inspect approved high schools and secondary schools with reference to their qualifications to give the preliminary training of a year.

The Attorney-General's ruling is an interpretation of law in regard to these complaints made through Dr. Harris by these different organizations, and he holds that complaints were well founded and should be respected, with the exception of one: The Department might carry on correspondence with the head of the training school if it wished.

The establishment of a standard of preliminary education has been a matter of discussion. The question has been raised as to when the one year of high school work should be had in order to qualify. Logically, it should be taken first, but the ruling is, it might be taken some other time. The law is silent on that point. It is fair to assume that the Department has to do practically only with the registration of nurses if the applicant furnishes evidences of a year of high school. From this, I take it, it is not a question to be raised when she gets it, unless her efficiency is determined by the examination and investigation. If she is not an efficient nurse she would be denied the right to register. The rulings says, "Nowhere in the Act of 1919 is the Department required or authorized to make or adopt rules establishing a standard by which schools for nurses or schools for preliminary education are to be approved or disapproved."

I have had to read this a number of times to see how under this law, or in any way, there

could be judgment passed without having some sort of standard on which to base it. Even this opinion was written under a set of rules of "statutory interpretation." The Department would be wasting time looking at the buildings, inspecting the hospital or training school unless the inspection was based on some standard. That seems to be cleared up a little farther on. The inspection is of the *efficiency* of the work rather than of anything else. The qualifications of the instructors, the number of graduate nurses, whether they be registered or not in Illinois, the superintendent of the training school, whether she shall be registered or not, do not seem to be stated in the law. The Department is not clothed with the authority to inquire into these things. Inquiry into the *efficiency* has to be made by finding out what sort of fruit the tree yields. In other words, the graduates of the school will have to be examined and tested as to the efficiency of the school, and those who make good on this test and in the examination, I take it from reading this law, are to receive a certificate of registration. There is some ambiguity there. There are some points for further argument, and if the rulings of the Department are not agreeable, the only thing I see is a court decision, because any public official, who is exercising right and is making rulings for others to abide by, can have his rulings reviewed by courts. That is what courts are for. The question of motives or good faith is not at all under consideration. It is a matter of the exercise of best judgment. In passing on the exercise of best judgment the recommendations of the Committee of Nurses and their judgment have not coincided with many others. The rules and regulations which they have applied to hospitals have been considered oppressive, ill-timed, ill-advised, unwarranted and arbitrary. The ruling of the Attorney-General on that point is worth noting, in view of the fact that the rules and the power to make them under the present law were left out inadvertently. The Attorney-General says that he takes it that the legislators had in mind leaving this out. He had no opinion as to why that was done, but I will venture one. Members of the legislature had no definite information on many of these points. They understood the features of the agreed bill were there and those qualified to know about it had for-

mulated the bill. They enacted it into a law, thinking they had gotten what we should have. I will venture the further opinion that the Committee on Nurses had their powers all but taken away without being at all suspicious that such a thing was happening, and I will venture the prophecy that an attempt will be made in the next legislature to reestablish some of these features. In that connection I want to read a few lines from the decision once more. The Attorney-General regards the rules as referred to in Bulletin 4, as rather transcending the authority of the police power, and that they were unconstitutional. He further states that the nurses might manage such schools in the interests of their profession (the nursing profession) rather than in the interest of the public whose welfare such rules are intended to promote.

Here is a very significant ruling which clarifies the situation not a little: "The differences between the Act of 1913 and that of 1919 clearly indicate a marked change of policy in this respect in the matter of accrediting or approving schools for nurses, in that the duty and power in this respect is vested squarely and solely in the said department as the responsible and impartial agency created by the state and representing the interests of the people as a whole, instead of dividing that duty and power with a committee of registered nurses."

The Attorney-General further says, "It may be contended that the power to approve necessarily involves a standard or rule by which the approval is to be governed. The standard is the *efficiency* of the school in affording to its students adequate preparation to enter upon the practice of their profession, not the compliance by the schools with a set of requirements as to organization, teaching or training forces, living conditions of students and daily average of patients in the hospital. The thing to be determined in approving the school is its efficiency, and that is to be determined by inspection of the school. The Department is to make the inspection, and the Department is to judge of the efficiency of the school. If, in the judgment of the Department after such inspection, the school is efficient, that is all the law requires to entitle the school to approve it. But that much the law does certainly require. The right of the school to approval depends upon its efficiency as

determined by the test of a careful, intelligent and thorough inspection by impartial and competent officers or agents of the Department aforesaid. It is evident that such a test may be more severe than that described by the Act of 1913."

"I find nothing in the Act of 1919 which authorizes the said Department to prescribe the educational requirement for admission to a school for nursing. Clause C, section 2 of this act requires that the applicant for registration must have completed a one year course of training in a high school or secondary school approved by the said Department or an equivalent course of study determined by examination conducted by said department. The statute makes this a requirement for registration, not a requirement for admission to a school for nurses. Ordinarily, such course of study would be completed before entering upon the course of study, of nursing, but the statute does not so require. If a school does not require the necessary preliminary qualifications, the inefficiency of the school will be shown by inspection and the school will not deserve approval.

"It is therefore my opinion that the Department aforesaid has no power to exercise, in relation to schools for nurses and hospitals connected therewith the powers described in paragraphs 4 and 5 of section 60 of the Civil Administrative Code.

The next part on the program is to propose a remedy, and I venture into that field with a concluding remark. The art of alleviating human suffering is not, of course, limited to any one group of people, but the foremost group is essentially the physicians. In any business or enterprise where coöperation is necessary, it is essential to have a head in command; and the assistants and helpers must take orders, or there is no coordination. The trouble with the law of 1913 and the present law is this, that it requires subordinates and assistants—in other words, nurses—to act independently and in a superior manner, exercising authority over their employer without restraint in certain lines. A proper and final solution, as I estimate the matter, will be when the education and training of nurses is entrusted to the same hands that administer the Medical Practice Act.

DR. EDWARD H. OCHSNER: For a number of years I have been hoping that this society, at one of its scientific meetings, would seriously

take up the nursing problem. Now that Compulsory Health Insurance is satisfactorily disposed of for Illinois, temporarily at least, and I hope permanently, the most important medical problem before the profession and before the public is unquestionably the problem of nursing. The successful practice of medicine and surgery to-day is so dependent upon efficient nursing that anything which impairs the latter must necessarily seriously affect the former.

Let me say at the very outset, that I believe there are many factors which have brought about the present unsatisfactory nursing situation and he who tries to explain the situation and lay the blame to one factor alone is wrong as usual when an attempt is made to explain complicated matters of economics in that way, and while I shall specifically call your attention to some of the most important factors which have brought about the present situation, I do not wish to be understood as claiming that these are the only important factors. I emphasize them more particularly however, because I believe they are fundamental and are the ones which can be most easily remedied and must be corrected before a satisfactory solution can be reached.

In discussing this problem we must ever keep in mind that there are two fundamental considerations. First, the welfare of the patients, and, second, the interests of the nursing profession. I firmly believe that the medical fraternity will favor any plan of adjustment which secures the best possible service for their patients and guarantees favorable working conditions and remuneration to the nursing profession, as in the long run patients can be served best only if the nurses are treated fairly and physicians are served best if their patients get proper nursing care. Injustice and unfair treatment to any large group of our citizenship always reacts unfavorably upon the public in the end.

What the public has a right to expect can be stated in one sentence, namely, it has a right to expect efficient nursing services, at reasonable cost, and in sufficient quantity to meet ordinary needs. That the public is not getting this at the present time everyone familiar with the situation will concede. How the public can secure this is the problem up for discussion this evening—a problem which, on the surface, may seem rather difficult, and yet one which I believe can be reasonably solved if an honest effort is made by the

opposing factions to concede what is fair and if selfish interests are kept in the background as completely as is humanly possible.

Extremes always beget extremes. What goes up must come down and if the pendulum swings too far in one direction it is bound to swing too far in the other before it reaches a happy mean. Twenty years ago the nursing situation was about as well adjusted for the needs of the times as it possibly could be. That portion of the public which had awakened to the desirability of expert nursing service was able to get it at a reasonable cost. Up-to-date physicians who knew its value to their patients and thus to themselves could always get good trained nurses without much difficulty; nurses had plenty of work at adequate pay. Then came the three and three and a half year training school curriculum craze from the effete East, and while this is only one of the factors which has caused the trouble it is certainly one of the major ones.

Foreseeing even then the havoc that the universal adoption of this lengthened course would sooner or later bring in its wake, I took the trouble of calling attention to this matter to three of the most prominent nursing superintendents of that time. In fact, I had a long session with each of them, but all of my arguments were of no avail because they were determined to put the three-year course into practice and as a partial result of this we have today many splendidly trained nurses suitable for hospital positions and welfare work, a large army of utterly incompetent women calling themselves nurses and inflicting themselves upon an unsuspecting public and a long suffering medical profession, a considerable number of women who missed the opportunity of a nurse's training because they were unwilling to devote three years to it, and a woefully inadequate number of suitably trained women for home nursing.

The proposition which I urged upon these training school superintendents was to retain the two years' course and give one year of post-graduate training to such young women as proved themselves especially qualified by natural endowment and education. While this would unquestionably have reduced somewhat the number of highly specialized trained nurses, it would surely have greatly increased the number of those who were especially trained for family and bedside nursing because a very large number of

suitable young women would have taken the two-year course who were unwilling to take a three-year course. This statement is not based on theory, but, to the contrary, it is based on actual experience. At various times during the last eighteen years young women have come to me for advice in reference to taking up the study of nursing and very often some of the most promising applicants have stated point-blank that while they would be glad to take a two-years' course, they were unwilling to give up three years to the training, and in many instances I could not help but feel that they were entirely in the right, for a properly conducted two-years' course will give a bright young woman all the training that she needs for bedside and private duty work. In fact, I am quite thoroughly convinced that the services rendered by the two-years' trained nurse in private families average higher than that rendered by the three-years' trained nurse, for the simple reason that the three-years' trained nurse has only too often gotten interested in other things than bedside nursing. In addition, the training schools have lost a good many applicants who, in the past, took the training simply for the purpose of better preparing themselves for wifehood and motherhood. Some of the most earnest, hard-working nurses whom I have ever known have been young women who were engaged to be married before entering training and who took the training in preference to a college course because they felt it would prepare them better for their new duties. Such a young wife and mother in a small town or a rural community is a valuable asset and the universal adoption of the three-years' course has done any amount of mischief along this line alone. The plan which I proposed at that time has every advantage of the present system and none of its disadvantages and it is one which could and should be adopted by every training school in the State to the advantage of the training school, the nurses and the public.

While criticism is often necessary, non-constructive criticism alone never accomplishes anything. For this reason I wish to here resubmit the program which I urged eighteen years ago, because I believe it would be as beneficial now as it would have been then, had it been adopted. At this point it would seem desirable to state briefly what a training school should strive to accomplish. It should train its pupil nurses,

first, to become efficient private duty nurses; second, for that role in life which, after all, the great majority of women sooner or later assume; and finally, in addition, those who desire it and are especially adapted to become proficient in the nursing specialties should be given an opportunity to thoroughly prepare themselves in these specialties. I make this statement at this time because it has seemed to me that in recent years many of the training school superintendents as well as the Department of Registration and Education have taken a narrow view of the nurse's training and have considered almost exclusively only the interests of the professional nurse and by so doing have robbed the training school course of much of its usefulness to society. To make professional nurses is an important function of the training school, but to give a large number of women who do not want to make a profession of their training an opportunity to improve themselves and make better citizens is, if anything, even more important.

One of the most important requisites for good nurses is suitable pupils in the training school and in order to get the right kind of pupils certain requirements must be established and maintained.

In order that the pupil nurse might fulfill her part of the bargain I proposed that:

- (a) She should be of good moral character.
- (b) Sufficiently strong and in good physical health.
- (c) Suitable temperament and of sufficiently intellectual and spiritual capacity.
- (d) She should be at least twenty-one years of age.
- (e) Have satisfactory educational qualifications, namely, graduate of a grammar school or its equivalent.
- (f) Have had one year of practical experience in some useful character forming and judgment developing occupation.

In order that the training school might credibly fulfill its share of the bargain I proposed that it should provide:

- (a) Good food.
- (b) Hygienic living quarters.
- (c) Suitable hours for work, study, rest and recreation.
- (d) Adequate theoretical instruction.

- (e) A two-years' course for all applicants with proper variation of work.
- (f) A third-year post-graduate course for such nurses as desired this extra year and who showed special adaptability in any of the nursing specialties.

With most of the above proposals practically everyone will agree, but with reference to some there may be considerable difference of opinion. I am thoroughly convinced that no young woman should enter a training school before the age of twenty-one. Nursing is serious business and most persons below the above age are not capable to take the serious responsibilities which are so often unexpectedly thrust upon a nurse. I have seen some very unfortunate results in a number of young women who entered upon the work before they were physically, intellectually or morally mature. I call attention to this question of age because I think the Department of Registration and Education has made a serious mistake when it permits accredited schools for nurses to accept probationers at the age of nineteen and because I understand that some of the non-accredited schools for nurses are accepting them even at an earlier age. Some ten years ago two sisters, sixteen and eighteen years old respectively, consulted me about entering a training school for nurses. I informed them that no reputable training school would accept them as pupils at that age and advised them to continue their present occupation and consult me again at the age of twenty-one. I heard a few days later that they had not accepted my advice, had applied at another hospital at nine o'clock the following Monday morning, were accepted, put in uniforms, and assigned to duty within two hours. This was an injustice to the patients and eventually of great harm to the girls themselves, as few girls at that age are sufficiently developed physically to withstand the strain to which a nurse is necessarily put, nor do they usually possess sufficient moral stamina to be safely permitted to come in contact with all the things that a nurse must necessarily encounter. Such practice should be prohibited by statute, as it is a menace to the moral and physical welfare of the state's citizens.

There has been a strong tendency in many quarters to make the educational requirements for admission to training schools too high, I

believe. I think a reasonable requirement is graduation from grammar school or its equivalent. To me some practical experience in life, coupled with real work, seems a much more important qualification than mere book learning. I would a great deal rather accept twenty probationers with a grammar school education who subsequently had spent three or four years at reasonably hard, responsible, character-forming and judgment-developing work, such as teaching, bookkeeping, business, etc., than to accept twenty young women who have dilly-dallied through high school, girls' finishing school, or even college with just a passing mark, who have never learned how to really work, who could not satisfactorily sweep a room, and who have never had a particle of responsibility. The first twenty would learn much more and make very much more useful family nurses than the second twenty. Some of the very best nurses I ever knew were self-educated young women with less than a grammar school education, who had worked hard to make a livelihood and acquire the little book learning they had. I do not say this to belittle the value of a college training for there is no one who values college education more than I do, but simply to emphasize the fact that there are other things besides mere book learning that make for efficiency in nursing.

There is a strong tendency among training school superintendents, the longer they stay in the work to magnify the importance of theoretical instruction and nursing fads, and what is known as paper work in the army, and to relatively at least undervalue and belittle the importance of everyday practical work, a tendency which has to be combated constantly by the physicians and surgeons whose first interest is the welfare of the patient and whose second interest is the real true best interest of the nurses in training. The danger of falling into this serious error should be recognized and constantly combated by these superintendents themselves. Unfortunately, this fault has been rather encouraged than discouraged by the Department of Registration and Education. Only recently I made inquiry at one of the best training schools in the city and found that the senior nurses were getting six lectures a week. This is out of all proportion of what they really need and if the lecturers were more careful in properly preparing their lectures and giving the nurses what they

really need, three lectures or even two a week would be better than six. I found in one of the training schools in this city that the lecturer on surgery devoted the greater part of an hour to a differential diagnosis between gall stones and appendicitis and the indications for operation while another devoted considerable time to a differential diagnosis between carcinoma and sarcoma. Some twenty-five years ago one of the most prominent professors of obstetrics gave the same lecture to the training school class that he did to his medical students. Such lectures I consider not only a waste of time but worse than a waste of time from the standpoint of a nurse's training because they have a tendency to make a nurse less efficient. One of the important functions of a nurse is to observe symptoms accurately and to so record or report them. If she has preconceived notions about diagnosis her report is more likely to be colored and distorted and hence incorrect than if she is simply taught to carefully observe and accurately report what transpires during the interval between the surgeon's visits.

Some will say that all these studies are interesting and furnish mental training; granted, but in that case they had better study ancient languages, the nebular hypothesis and the binominal theorem, the study of which surely furnishes a greater amount of mental training without impairing the usefulness of the nurse. No, nursing is an intensely interesting and practical occupation in which there is much of real importance to learn and all non-essentials should be most carefully and rigidly excluded. The medical lecturers and the nurse teachers should constantly ask themselves the question, "Is this essential? Will this enable the pupil to become a better and more efficient nurse?" If they would all do this, fewer lectures would suffice and much valuable time and energy could be saved, but before this can be done the Department of Registration and Education will have to assume a little different attitude. Today the training school teachers and lecturers have to constantly ask themselves the question, "Will our nurses be able to pass the examination?" Only recently I remonstrated with a medical friend who was lecturing to nurses about the kind of information he was imparting to them. He said we have to give these things to them or they will not be able to pass the board, then went on to say that recently

one of the questions asked was, "Describe the fetal circulation." Does anyone with a particle of sense believe that a knowledge of the circulation of the unborn babe is essential to good nursing or that such knowledge makes a nurse more efficient. In my humble opinion such questions are nothing short of stupid and an examiner who asks such questions should be instantly dismissed.

In this connection, permit me to call attention to a paragraph in Bulletin No. 4 of the Department of Registration and Education in force September 1, 1919, which is found on page 16 and which reads in part: "Instruction in class and lecture with three hundred and twenty-four hours as the minimum total for the two years' course." This is not only an excessive number of hours of theoretical work, but it is clearly not in conformity with the spirit of the revised nursing law passed by the Fifty-first General Assembly, for, as I understand it, the number of hours of theoretical instruction now required of the two-year student is practically the same as the number of hours previously required in the three-year course. Administrative officers should not only obey the letter but also the spirit of the law. If they cannot conscientiously do both there is only one honorable alternity and that is to resign.

It is clearly the duty of superintendents of nurses to see to it that the nurses in training not only get the right kind of theoretical education but also proper variety of practical experience. Two extremes must be scrupulously avoided, namely, keeping a nurse too long in one department or employed in unnecessarily menial occupations, and the other to be switching the nurses around too often and having them spend a great deal of time in work which is not often really nursing. In connection with the first, a good many hospital authorities require nurses in training to do altogether too much menial work, thus, for instance, work that should be done by maids, orderlies and scrub women. I have recently heard of a case where a nurse in training in one of our best hospitals was kept twenty-one weeks doing scullery work in the different bathrooms on the different floors. This is clearly a serious injustice for which there is absolutely no excuse, and while she should know every detail and be able herself to keep a bathroom in clean, hygienic condition, keeping an

intelligent woman at such work for twenty-one weeks of the three years' training is one of the things that has discouraged young women from entering nurses' training. On the other hand, changing nurses about too frequently and giving them training which has nothing to do with nursing is not only bad for the hospital and the patients but equally bad for the nurse, because it makes her a jack-of-all-trades and a master of none. In one hospital with which I was connected some years ago nurses were moved from one operating room to another every month with the idea that they got better training in that manner. They scarcely learned where everything was when they were required to move again. As a result, they were much less efficient and learned much less than if they had been kept in one operating room for three consecutive months. The modern fad of having nurses do laboratory work without sufficient instruction is another thing that is both bad for the nurses and the hospital. Reports of urinary and blood findings come in that are not only valueless but absolutely misleading. No nurse can learn to do reliable laboratory work including microscopy in a month or six weeks or even three months, particularly if she has as an instructor some interne who knows very little about it himself and takes no interest in the work. If a nurse wants to become a laboratory technician after she graduates, that is her business, and let her go for six months and learn the work thoroughly, then she will be some use to herself and the patients, or if she wants to take a post-graduate year, well and good. The other way she is nothing short of a menace. Illustrations of similar mistakes in both extremes could be multiplied almost indefinitely but these few illustrations will, I believe, convey the idea which I wish to convey.

An earnest, bright, industrious young woman with the proper qualifications taking a two-year course, as outlined above, will, at the end of two years, have become an efficient nurse for general duty. If she wishes to follow private nursing as her special calling to compel her to take another year's training is a sheer waste of time. If, during her two years' training, she has shown special aptitude in any one of the other nursing specialties, such as administrative work, obstetrics, children or surgical work, she should be encouraged to take a post-graduate year, during which time she should be given

charge of the floor or department for which she is especially fitted with proper instruction along the line of her specialty and given reasonable remuneration.

In conclusion, permit me to urge upon the training schools of this state, first, that each school establish an intensely practical intensive course of two years in which only the essentials of nursing be taught and in which the pupil nurses be not required to render menial service or waste their time on non-essentials and fads. Second, have only those schools with ample means and a large variety of medical and surgical patients under their care give a post-graduate course of one year to such graduate nurses as show special qualifications and desire special training in the nursing specialties.

If the Department of Registration and Education would sanction the plan above outlined and the training schools of this State would adopt it, I feel confident that the shortage of training school applicants, so generally complained of, would soon in large measure be overcome and as a result a much larger number of nurses suitable for family nursing would soon be available.

DR. M. L. HARRIS, President of the Illinois Hospital Association: You have probably learned by this time that this is quite a large subject. To my mind the trouble with the nursing situation began with the passage of the first registration act for nurses. Previous to that time we had an abundance of very competent nurses to wait on the sick under the advice and instruction of the physician. From the time of the registration of nurses the situation has been changing in this direction that the nurses who wait on the sick have been constantly growing in number while the women who advise what to do for the sick have been constantly increasing in number until today the great majority of them are women who are advising what to do for the sick, so that we have few left to wait on them. This situation culminated last year when the nurses had a bill introduced in our legislature which made it unlawful for any person to wait on the sick except a registered nurse. It was time then for somebody to rise up and object.

We have heard a great deal about the present law and an earnest desire on the part of the Department of Registration and Education to enforce the law. It was said that the eminent

lawyers who drew up this bill thought they were drawing it up so that it interwove with the present Administrative Code and left all of its provisions in the bill, or at least they thought they were in, so that it could be administered under the Civil Administrative Code as had been the previous act. That is not correct.

The lawyer who introduced this bill and handled it knew very well that this bill did not contain the provisions covering the nurses' committee, because I pointed it out to him myself. I pointed out to him that this bill did away entirely with the nurses' committee and all the powers which the old law had given the nurses' committee, but he could not see it. The bill, therefore, went through after ample warning that it did not have any of the provisions of the old bill, and the nurses' committee was shorn of its power. It is said that the Department, according to this opinion of the Attorney-General can not seek the advice of the nurses' committee; it has to decide everything for itself. Let us see. The Attorney-General says, "This does not prevent the said department from availing itself of the advice and assistance of members of that highly important and honorable profession to the extent that the Department may deem requisite to the performance of its duties. Neither does it prevent the department from making use of such assistance from physicians and surgeons or from laymen whose advice and assistance the Department may deem valuable in the administration of the nursing act."

That is all the power the Department ever had. The nurses' committee never had any power except the powers specifically provided in the 1913 act. In the Administrative Code it reads that these committees shall be appointed for the various professions, and the Department shall not act without advice of these committees, but there is nothing in the opinion which says they must follow the advice. This does not prevent the said department from taking the advice of this committee.

The head of this department has said that he wanted to co-operate with the physicians. Why has he not accepted it and sought it? Why did he turn it down when it was offered to him? The profession went to him (I happened to be one of them); we offered to co-operate with him and with his Department in any way possible in arriving at a solution of the nursing question

and the formulation of rules to govern training schools. Did he accept it? He promised to accept it. The Department said there will not be any rules made until physicians and hospitals are called together to consult on this matter. Did he ever do it? Never. We waited month after month to hear from the Department so that we could consult with Mr. Shepardson in making rules. The first thing we knew of the existence of rules was when we learned incidentally that a meeting would be held in Chicago for the purpose of promulgating rules which had already been formed.

He has said that this is a very dangerous opinion because it may affect the Medical Practice Act. Gentlemen, I do not believe it. There is a great difference between this act and the Medical Practice Act. In the first place this act does not regulate the practice of nursing; the Medical Practice Act regulates the practice of medicine. This act has to do solely and entirely with the subject of registration of nurses, and it has nothing whatever to do with the practice of nursing. This act does nothing but provide for those nurses who care to register. Any nurse may practice nursing. Graduate nurses and trained nurses may practice alike. The Department cannot interfere with them in any way. Is that so in medicine? The Medical Practice Act regulates the practice of medicine. No one can practice medicine who does not come under the Practice Act.

Since the Department has made rules under this act we had to protest because in the first place the rules were unreasonable. In the second place the Department had no power to make them. In the third place the rules nullified the law or attempted to. They nullified the law because they tried to do in two years what previously had been accomplished in three. That is not right. It is unjust; it cannot be done. Even some of the nurses themselves who favored the Department said it was impossible for them to comply with the rules. The rules were unreasonable because every hospital in the state would be a closed shop under the control of the nurses' union, because the rules said, "No one could be superintendent, they could have no supervisors and instructors in their schools who were not R. N.'s in the State of Illinois." Is not that a closed shop? No one could go out of the state and bring in a superintendent,

whatever her qualifications might be, and put her at the head of the training school. If this were done, you violated the rules, and your school immediately became a disreputable school. I use that word advisedly because it is the word used by the Department. "Your school is not reputable." Is there any difference between not reputable and disreputable? There is no difference between that which is not reputable and that which is disreputable. Disreputable simply means not reputable. There is no difference between a man who is not honest and one who is dishonest. You are either dishonest or honest. You are reputable or disreputable, and when the Department declares a school disreputable because it does not conform to the rules which make it a closed shop, then it is about time that somebody was objecting and interfering.

The Attorney-General says the Department has no right to determine the teachers of the training school and who shall be supervisor. There is only one place in the whole act which gives the Department any power, and that only when a nurse comes up for registration. Then it says, "She must have come from a school inspected and approved by the Department." The opinion says that that power does not give them the power to determine living conditions, the number of supervisors, etc. It says the criterion must be "Is that school capable of turning out efficient nurses?" That is the only question. And it has been said here very aptly that that must be determined by examining the nurse. You cannot tell whether a nurse is efficient by living conditions in a school or by how much you feed her. That is not the question. Is the nurse a competent nurse, and that is to be determined by examining the nurse.

As to the question of the preliminary requirements, it naturally comes up in case a nurse wishes to register. If a girl wants to go into a school and learn to be a nurse and to go out and practice nursing and wait on the sick, and does not wish to register, the Department has nothing whatever to do with that girl. It has no right to say what shall be her qualifications when she enters the school. It has nothing to do with it unless she determines to register. The Department may ask the question, "Has she had a year of high school?" No? Then it says, "She cannot register." The Department undertakes to demand that every girl shall have

a qualifying certificate from the Department before she may enter a training school. That is going beyond its power. The Attorney-General says so.

It has been claimed that this is an attempt to break down educational standards and lower educational standards. That cry is made without the slightest foundation. There has never been such an attempt made. There is no attempt in this bill to do it. One great thing they all overlook is the necessity of getting somebody to wait on the sick. This question came up in our conference with the Governor. The Governor very frankly told that it was impossible for us to live up to the rules of this Department, and we were not going to do it. "Well," he said, "you will not disregard the law." I said, "No, we all want to live up to the law and live up to all reasonable rules, but you must remember, Governor, that necessity overrides all rules, and we must take care of the sick if we have to violate the rules in doing so." He said, "Doctor, you are absolutely right; it must be done, and I shall see to it that it can be done."

We are up against a serious proposition. We cannot get away from it. There are one or two hospitals that have large affiliations that can get girls. But the hospitals throughout the United States are having great difficulty in getting nurses. It is not a local situation entirely. At the meeting of the American Medical Association, held two weeks ago in New Orleans, where I had an opportunity of communicating with every state in the Union, I found that other states are in the same fix that we are in Illinois in regard to the nursing profession. Several men said to me, "I wish you would come down to our state and help us out." That is the situation all over the country, and it has come about by the nursing organization making a deliberate and concerted attack throughout the entire country to dominate and control hospitals, as has been expressed publicly by the president of the organization here. "It is the intention of the nurses to retain control of the hospitals." Those were her words. That has been fostered by the organization throughout the entire country, and the hospitals throughout the country are suffering under that today.

The nurses are constantly growing fewer and fewer. How to remedy it is a serious question. In all lines of employment there is a shortage of

help due to general conditions, but the shortage of nurses has been growing ever since the first Registration Act. From that time on the tendency has been to limit the supply and increase the training until the girls have been overtrained as nurses. They have been trained out of the field of waiting on the sick and have become advisers of the sick. That was perfectly evident in the bill which they introduced a year ago, where they attempted to make two classes—advisory nurses who were to give all the instructions and do all teaching, and advise patients at the bedside, and the menial nurses who were to do all the work. The menial nurse could never do anything else. She was kept for that purpose and never allowed to get out of that position. The real nurse was to boss her. The real nurse was to have all the advisory positions, all the public health positions, all teaching positions, all supervising positions, and everything of that kind. Other nurses could never have a position of that kind under the law, but were kept to do the menial work. Of course, all these conditions were wiped out of the bill.

There is no question about the present bill. The reason that the provisions of the bill have not been carried out by more hospitals is the fact that the Department held over their heads the threat that unless they lived up to the rules the hospitals or schools would be declared disreputable and no school wants to be declared disreputable.

Now, the training schools may disregard these rules without any danger of being declared disreputable, and if the training schools will give a two-years' course and give a thorough practical course in waiting on the sick, we will have much better nurses, more competent nurses, and more of them. Concerning public health workers, teachers, supervisors, etc., there is no question. We need them. Let them take their training to qualify them for their work and they will find positions. We had no trouble or quarrel with them in Springfield in trying to pass this bill. The nurses were told frankly, plainly and openly that they might write into this bill anything they wanted in the way of qualifications, length of service, or anything else for that class of workers, if they would permit us to write into the bill the provisions for the real nurse to wait on the sick, but they would not do it; consequently

we had to word the bill so that the people might get real nurses to wait on the sick.

DISCUSSION

MR. FRANCIS W. SHEPARDSON, Director of Registration and Education, Springfield, Illinois, stated that in the last legislature a law was passed known as the Nurses' Law. It was drawn under the direction of some skilled lawyers, and it was assumed by them that it was brought into perfect relationship with the Civil Administrative Code, so that its provisions would fit right into the Code, there being kept in mind a certain phrase that the Department of Registration and Education under certain conditions should have certain powers whenever the law regulating a profession, trade or occupation so provided.

If the opinion of the Attorney-General, as quoted tonight, was to be followed, it was quite evident that the law for the regulation of nursing required that in certain matters judgment be pronounced, that a decision be reached, and the question at once arose, how should that decision on professional matters be reached? By the Director? No. Because under the spirit of the Civil Administrative Code the Director was not a professional man; he could not belong to any one of the professions, trade or occupations regulated by his Department. How should he be advised in order that his judgment might be made correct? It was thought that the Civil Administrative Code provided a way, namely, that none of the things enumerated in a certain list should be done except on the opinion in writing of a majority of the committee appointed for that purpose, and then there was a classification telling what the committee should be in one of the professions, trade and occupations recognized.

If the opinion of the Attorney-General be accepted, the committee to give advice on nursing matters had no power; therefore, the non-professional administrators of the Department of Registration and Education were left in a position where they could not do anything, because they were called upon by the Code to take action of a professional character without advice from the profession, and the body which under the Code was provided to give that advice was taken away.

If all these advisory committees were swept away by the opinion of the Attorney-General, and if the officers of the Department were by law not members of a profession and could not do any act professionally, how were they going to hold in less than a month important examinations for licensure in this state, where they must have the opinion and advice in writing of professional committees? These were some of the administrative difficulties in which he found himself, on account of the opinion the Attorney General had made in regard to the nurses' law.

The Department wanted cooperation in every way possible with the professions in order to make the administration of the law just as satisfactory as it could be. No one was more willing than the speaker

to cooperate with those who ought to work with him for the best interests of the professions represented. The speaker said he had asked for cooperation in some respects where the medical profession had not seen fit to give it.

DR. JOHN DILL ROBERTSON stated that Florence Nightingale had only received three months' training as a nurse in a German school. Since that time great progress had been made along scientific lines. He said that science always simplified things, and scientific progress had made nursing more simple.

Twenty years ago he organized a school for nurses known as the Chicago Training School for Nurses. A course of eighteen months was given. There was three months' lecture work, three months in a hospital, three months outside, three months more lecture work, and so on, making altogether eighteen months. In the files of that institution were questionnaires signed by such men as Professor Haines and other members of the faculty of the University of Chicago, who had employed these nurses that received three months' lecture work, and the questionnaires they filled in spoke for themselves.

It was a mistake to call nursing a profession; nursing was housekeeping for the sick. On the corner of Fulton and Ada Streets a hospital had been opened, and there were 60 nurses for 15 patients. The patients did not pay a penny for treatment. Their food was prepared by a trained dietitian. These 60 nurses carried the trays and did the work and the head nurse, a three year graduate, was made responsible. He could demonstrate by intensive training what Dr. Arthur Dean Bevan said in his annual message to the American Medical Association in 1918, that with an intensive three months' training young women can be developed into most useful war nurses, and meet the demands of the government. These 60 nurses were paying fifty dollars apiece for three months' training, and the three thousand dollars thus secured will pay the expenses of running the hospital.

DR. CHARLES E. HUMISTON (closing the discussion on his part): I believe the matter of medical education is not going to suffer. Whether this committee has been doing work or not, and whether the law placed around medical education is two years above the law already, the colleges have never depended on regulation at Springfield, but rather have dictated what the requirements should be. The two years additional is by consent and the colleges request a qualifying certificate for entrance.

I bespeak a very careful reading of the Attorney General's opinion, and I also look forward with pleasurable anticipation to an announcement by the Department of Registration and Education as to what they may do and what are their rights under the law as it is now interpreted.

DR. OCHSNER (closing the discussion): It is rather unfortunate, but it is nevertheless true, that there is just about as much fad and fashion in the modern professions as there is in women's dress, and because a number of highbrow ladies in the east who were supervisors of nursing, and not nurses themselves,

favored this particular fad that the three-year course became fashionable. When the fashion struck Chicago it was just as imperative upon the highbrow nurses in Chicago to demand a three-years' course in Chicago as it was for other ladies to wear furs in July and half dress in winter. That is why we have the three-year course in Chicago today. It was fashionable to adopt the three-year course and it had to be adopted.

I believe further that the time is ripe for the medical profession to go on record through their official societies—the Chicago Medical Society and the Illinois State Medical Society—and say that a two-year course is the proper thing. Then two years will become fashionable and most of the hospitals will adopt it. Fads and faddists and extremists had had their day, and it is time for an awakening and for the sane, sensible members of the profession to assert themselves.

A SAMPLE OF DOCTORS' WAGE UNDER STATE MEDICINE.

Dr. Frank J. Wagner has resigned as health officer of Santa Monica, Calif. The salary attached to the office is but \$40 a month. Doctor Wagner does not think it sufficient and his resignation came after the commissioners had refused to increase the amount. Dr. Wagner served all through the influenza epidemic and the visitation of smallpox. He showed that the City of Venice paid \$175 per month to its health officer, but the commissioners did not regard this as a criterion.

"BANKRUPTCY OF GERMAN SCIENCE."

In an editorial in the *Journal de médecine de Bordeaux* published last winter attention was called to the fact that a recent German book on bacteriology had deliberately suppressed all reference to French and American authorities. The *Medical Record*, in its issue of May 15, expressed the opinion that the German in question may have been unable to secure access to recent works of the Entente nations. An Austrian was cited who under similar circumstances had apologized for failure to cite foreign authorities. We suggested that under the circumstances it might be just to give the Teuton the benefit of the doubt rather than to look upon the omission as new propaganda. Professor Cruchet, editor of the *Journal de médecine de Bordeaux* for June 10, 1920, xci, 11, courteously dissents from our stand and holds that the suppression of mention of our authorities was deliberate. He devotes his editorial page to the justification of his position with the above mentioned caption. He is certain, apparently, that a new propaganda is already in operation. There is a strong motive for one, because German science has nearly gone bankrupt as a result of five years of isolation, while conversely France has made notable gains in prestige. For fifty years Germany sought to force French science into the background, and there is no doubt that she will seek to renew her machinations in the years to come.

Hence in any case of failure to mention the work of its old antagonists, the presumption, Cruchet thinks, is not unreasonable that such suppression has been calculated.—*Medical Record*, Sept. 11, 1920.

GERMAN PAPERS ARE COMMENTING ON THE ATTITUDE OF THE MEDICAL PROFESSION IN AMERICA TOWARDS COMPULSORY HEALTH INSURANCE.

It is interesting to note that the German papers are commenting on the attitude of the Medical Profession in America toward Compulsory Health Insurance.

The *Medical Clinic* of Berlin comments on the matter editorially and apparently admits that the system in vogue in Germany has practically reduced to State servitude a former free and independent profession. It is further remarked that negotiations for the renewal of contracts were abruptly broken off when fees of twelve marks for house visits and eight marks for office calls were suggested. At the present depreciated value of the mark, this represents about twenty-five and seventeen cents respectively in American money, and laying aside all question of the present condition of foreign exchange and the purchasing power of the mark, the real significance of this report lies in the fact that private practice in Germany has become almost a thing of the past, and that the State has virtually assumed control of the practice of medicine. This is precisely the situation that is foreseen and dreaded by physicians in this country, who realize that control by the State of the conditions of practice, means complete loss of independent action. Once the power of assigning a physician's field of activity is placed in the hands of the State and the subsequent steps to compel socialization are easy. How this problem is to be met by American Physicians is by no means clear. One attempt at solution may be recognized in the decision of the New York Police Department to collect funds to both equip and endow a hospital in Brooklyn for policemen and their dependants, a group estimated at some 60,000 persons. The plan suggested calls for a fund of \$5,000,000 of which approximately a half shall be used for endowment and maintenance. No announcement has yet been made as to how the institution shall be manned, nor what the approximate cost to the individual for treatment is likely to be. The idea of voluntary co-operation, which lies at the bottom of this plan, and which could be developed by utilizing the already salaried surgeons of the Police Department, thereby centralizing their work and giving them added efficiency and broader opportunity is worth consideration, as a plan which might be expanded to cover groups of citizens whose incomes are at present inadequate to command the better sort of medical care but whose importance to the community make it essential that it should be placed within their reach. The scheme of voluntary cooperation is free from many of the drawbacks inherent in plans that are initiated and controlled

by the State, and it may be that a comprehensive plan for voluntary enrollment of groups of citizens under proper financial conditions could be so arranged as to bring about a readjustment of the present field of medical practice without interfering with the opportunities of the physician for normal growth that is inherent in State Socialism.

The objection of thinking physicians to the plans so far brought forward arises from their certain knowledge of two unavoidable results—the fact that the beneficiaries would not receive the improved medical care that is promised and that physicians themselves would tend to sink into mediocrity.—*Long Island Medical Journal*, Sept. 19, 1920.

THE VALUE OF ALCOHOL AS A THERAPEUTIC AGENT

The title of this editorial has probably been printed thousands of times. Nevertheless it covers a matter of extraordinary interest, and no less a body than the Section on Therapeutics and Pharmacology of the Royal Society of Medicine of London has recently employed it.

The President of the Society admitted that he could discuss the subject only from the standpoint of the pharmacologist, and stated that he would leave the consideration of the therapeutics of alcohol to those who had practical experience. He was skeptical of the importance sometimes attributed to the minute traces of ether and other constituents of wines and distilled liquors, but he announced, very positively, that in his opinion there was no doubt that alcohol has a value as a food, as well as a value as a drug, yielding energy to the body practically immediately after its ingestion and taking the place of an equivalent of starch or fat in this action. He did not go so far as to commit himself to the view that alcohol is a desirable source of energy for the body of the healthy person, but in certain conditions there is no doubt of its advantage since it requires no digestion, is rapidly and completely absorbed, and not susceptible, as are carbohydrates, to fermentation by yeasts and the action of bacteria. For these reasons it is able to supply to a system which is temporarily unable to obtain it from normal sources the minimum of energy necessary to enable it to carry on, and tide over a critical period. In connection with its employment as a so-called stimulant, Dale admits the correctness of pharmacological research, which indicates that it is not a stimulant in the ordinary sense of that term, but it does affect the circulation very materially, dilating the superficial vessels and in many instances restoring circulatory equilibrium.

We are interested to note that Dale emphasized the importance of differentiating between results which are obtained by the ingestion of alcohol on the part of normal animals or man and its employment in those who are ill, and that its habitual use in treating syncope and collapse is not due to a stimulant effect but to a removal of severe central inhibition. This seems to him to be the explanation of its value, and

in pneumonia he appears to think that abnormal reflex irritability of the respiratory center impairs the oxygenation of the blood, and that alcohol by restoring a quiet, deep, effective respiration ought to be of use.

On the other hand, Dale has no confidence in the view that alcohol is a sort of specific against infection, particularly influenza.

In the discussion which followed, Mellanby, who has done such excellent experimental work for the British Control Board, Liquor Section, after quoting Atwater and Benedict's classical experiments, exhibited a series of curves based upon experiments made upon dogs, demonstrating the rapidity of absorption of alcohol in various dilutions and the rapidity with which it was oxidized in the body. These experiments of Mellanby, while of great interest and importance, have recently been supplemented or displaced in value by the investigations carried out by Marshall in this country upon human beings, his conclusions being, of course, the more dilute the mixture of alcohol and water the slower the rate of absorption.

Mellanby also showed a curve, the result of an experiment upon a man weighing about 140 pounds, by which he calculated that the subject oxidized 10 Cc. of alcohol per hour and that the rate of disappearance of alcohol from the blood almost certainly represents its rate of oxidation.

Discussing alcohol as a digestive stimulant, Hutchison stated that there was a general agreement amongst clinicians that alcohol is undoubtedly a food of special value, particularly in diabetes and prolonged fevers; that it is a digestive stimulant often in cases of impaired appetite, gastric atony, and in convalescence; that it is also useful as a carminative in severe cases of flatulence; that its effect in dilating superficial blood-vessels is of use in combating the effects of a chill, as well as in rigors; and that it has value in helping to reduce blood-pressure during an attack of angina. The drug also is of value because of its narcotic action in some cases of insomnia, especially in old people and in the delirium and restlessness of acute illness. Hutchison believes that its value in acute heart failure, as in syncope, depends upon its reflex stimulating effect. By quieting restlessness it is also indirectly of value to the circulation. His view is also that there is some reason to believe that in septic infections it increases vital resistance, a fact that the writer proved some years ago.

No less a well-known authority than Hale White agreed practically with all the views so far expressed. A glass of wine taken with a meal he thought was advantageous when a patient was weak and "on edge." It would not only quiet him and promote digestion, but do no harm, and he said he had never known an alcohol habit formed from taking it during convalescence.

Using scientific terms he cleverly summed up the views of many other human beings when he stated that the chief therapeutic value of alcohol was as a pleasant depressant peculiarly efficacious in inhibiting

peripheral sensations such as slight pain and discomfort, and by its slight cerebral depressant effect so diminishes the trivial worries that bother the sick.

Concluding his remarks, Hale White stated the well-known fact that brandy was the best alcoholic preparation in diarrhea, and that old brandy had superior therapeutic effects over that recently made.

Leyton, discussing the value of alcohol in diabetes, showed from clinical experience that its addition to the diet greatly increased the energy of a patient, enabling him to take more exercise and to gain weight.

Langdon Brown expressed a view in accord with Leyton, and also said that it was his belief that it increased the secretion of the gastric juice, that it added to the patient's comfort when ill by removing nervous irritation, and he agreed with Willcox's view that the administration of oxygen gas passed over brandy contributed to the recovery of some cases of pneumonia.

Esther Harding in concluding the discussion, stated that in the case of children the uses of the drug fell under the same headings as in adults: (1) In respiratory embarrassment, especially the rapid, shallow, inefficient breathing of bronchopneumonia, alcohol quieted the respiration and so made it more efficient. It was true that the indication for the use of alcohol was commencing failure of the right heart, but the effect of the drug was not to flog the already overburdened heart, but to relieve it of some of its intolerable burden by slowing the respiration and improving the oxygenation of the blood. (2) Alcohol was, in her opinion, the most valuable sedative and hypnotic drug we possessed for infants and young children. (3) As a food in cases in which no ordinary diet could be taken: (a) in milk intolerance of marasmic infants alcohol would sometimes tide a patient over a few days till milk or whey tolerance could be re-established; (b) in the persistent late vomiting which killed so many patients after severe diphtheria. She has kept a child alive on more than one occasion under such circumstances on saline, brandy, and sugar, given by the stomach, for three weeks. A word of warning on the danger of the persistent use of alcohol in young children was hardly needed, and it is wise to remember that small doses of spirit given to an infant over a period of weeks might easily result in damage to the liver.—*Therapeutic Gazette*, September, 1920.

"CHRISTIAN SCIENCE" AND THE MATERIAL PRESS AGENT

The letter from the "Christian Science Committee on Publication" which appears in the correspondence department of the June 5 issue J. A. M. A. is further evidence of the smooth functioning of the publicity department of the late Mrs. Eddy's organization. Let there appear anywhere a published item that may seem, either directly or remotely, to refer unfavorably to "Christian Science" and forthwith the editor receives a letter from the local "Committee on Pub-

lication" supplemented, possibly, with a flood of letters from members of the cult. Woe to the newspaper man who exposes, be it ever so gently, the fallacies of "Science" which is misnamed "Christian." One can but admire the well-oiled publicity machinery of the "Christian Science" organization. Its upkeep must be heavy but it hits on all cylinders. If the medical profession maintained a publicity department that cost a hundredth part of the "Christian Science" press agency, hands would be raised in holy horror and from the house-tops would come the cry: The very foundations of our civil liberties are threatened. Whatever the "Christian Scientists" believe about the immateriality of disease—and just what they do believe is not clear—they are obviously of a mind when it comes to maintaining a material publicity department with material funds.

INSECT POWDER SHOULD KILL INSECTS

BEWARE OF ADULTERATED PRODUCTS

McDonnell, C. C.; Roark, R. C., and Keenan, G. L.: Insect Powder Bulletin 824, United States Department of Agriculture, Government Printing Office, 1920, says: When the elusive flea, the nocturnal bedbug or the festive cockroach turns up his nose at insect powder instead of lying on his back and turning up his toes, there is a reason. The reason, according to a recent report from the Bureau of Chemistry of the Department of Agriculture, is adulteration and sophistication of the insect powder. Real insect powder, composed of pyrethrum, representing the powdered flowers of the chrysanthemum, will invariably cause the aforementioned species of insects to shuffle off this mortal coil. As far back as 1856, it was discovered that the powder of these flowers had the peculiar power to attract insects, and then numb or kill them. Although early writers believed it harmless to man and larger animals, isolated case reports are available of harmful effects following the absorption of fairly large doses. Naturally, any substance with such potent properties early became the subject of exploitation and, unfortunately, insect powder appears to have been extensively adulterated since it first entered into commerce. From the first this adulteration consisted of mixture with the powder of other flowers, and with the grinding up of the stems and leaves as well as the potent portion of the plant. More recently, barium chromate, lead chromate, yellow ochre and similar substances have been used as adulterants. Because of the nature of the substance, the determination of the purity is a difficult matter. The best test is to try it out on the insects. If it does not affect one or more species within a fairly reasonable amount of time, it is heavily adulterated. If, on the other hand, in the words of Glover, when sprinkled over them or placed in a circle and they are made to pass over it, for a few steps they appear very lively, but soon stagger, and after a few struggles fall over and soon cease to live, then it is good insect powder. Microscopically, certain determinations may be made by those well informed

as to the cellular characteristics of the plants and, chemically, the ash of the powder may be examined for foreign chemical substances. All of these methods the Bureau of Chemistry has summarized in a recent pamphlet. Genuine insect powder kills insects.—J. A. M. A.

BOYS AND GIRLS DRUG USERS

In a report made by Albert Weber of New York, chairman of the Committee on Narcotic Drugs and Crime of the American Institute of Criminal Law and Criminology, at its annual meeting held in Indianapolis last week, the statement was made that 75 per cent of the narcotic drug addicts in the United States are boys and girls approximately 16 years of age.

A DRUG LAW DECISION FAVORABLE TO PHYSICIANS

A COURT DECISION AFFECTING THE HARRISON LAW

An interesting court decision, relative to the enforcement of the Harrison Act, is quoted in "Public Health Reports" of July 18, 1919. In the case of Foreman vs. United States (255, Federal Reporter, 621), a physician had been indicted and tried upon the charge of unlawfully dispensing, distributing and selling morphine. The proof showed that what he had done was to issue prescriptions for morphine and cocaine to addicts, to gratify their craving for the drugs, and not for the purpose of cure. These prescriptions were filled by different druggists, the physician not acting in concert with any of the druggists, and not knowing where the prescriptions were to be taken to be filled.

Under these circumstances, the Circuit Court of Appeals for the Fourth Circuit held that the physician had not made a sale of the drugs, nor had he done such a dispensing or distribution as would amount to a sale, and that he therefore could not properly be convicted under the indictment.

INTER-STATE MEDICAL RECIPROCITY

Resolutions adopted by the House of Delegates of the Ohio State Medical Association, at its last annual meeting, held in Toledo, June 1, 2 and 3, 1920:

"Whereas, in our forty-eight States, there are as many separate medical examining boards; and

"Whereas, licensed physicians in one State may not always practice in other commonwealths without vexatious examinations and expense; and

"Whereas, the Government in time of war frequently sent physicians into army camps in other States, and therefore disregarded State boundaries; and

"Whereas, there is practically homogeneity in the anatomical and psychological make-up of the people in the various States; and

"Whereas, the same may be said of the physicians throughout the land. Therefore, be it

"Resolved, that it is the opinion of the House of Delegates that the right to practice in one State should

be extended to include the right to practice medicine in any part of the United States. Be it further

"Resolved, that a copy of this resolution be sent to the proper officials of all medical societies, and to national and quasi-national medical associations, and that the American Medical Association be especially urged to perfect a plan by which interstate medical practice be made as easy as interstate commerce."

AN ARMY IS AS GOOD AS ITS FEET

One may well look at the feet of our women on the street and ask, "Are we in civilized America in the twentieth century or is it mediæval China with women's feet constricted and distorted?" The heels and the toes that fashionable shoes present should set the sanitarian to thinking.

It is not in America alone or merely now that these problems present themselves. At the beginning of the war, before this country became interested to the extent of taking a part in it, Dr. A. Ritschl, a German, voiced in the periodical literature of the day the following sentiments of disapproval: "But how badly the feet are treated by a majority of our people, partly from ignorance, partly through foolish vanity, by shoes too short or too narrow, with heels too high. What misshapen and deforming shoes they dare offer our women and girls even in this grave time of war, when it is the duty of every one to make himself strong and efficient." He further comments on conditions as they then existed by saying, "A glance at the people moving in a city street shows that crowds of these have bitten at the injurious bait." Dr. Ritschl goes on to discuss the high-heeled, narrow shoe from the anatomical and medical points of view. He also comments on the heel that is too low.

The condition that set this German physician to thinking is the rule, almost, in this country. The streets of all our cities witness great crowds of women and girls shod in injurious foot gear. It is not that men have not injurious and insanitary fashions, but at the moment it is the high heel and pointed, wedged-shaped toe, that are under discussion. High heels on the street furnish another example of what has been termed "the American failing of diamonds at breakfast," and, while they may be demanded for a short while as a portion of party adornments, they are obviously out of place on the street. But they are there and, furthermore, are worn by women in occupations requiring continuous standing, by shop girls, restaurant waitresses, elevator attendants and factory employees.

It is important in this connection to realize that more and more it is known and taught that the human body is a connected whole, and local causes for what appear to be local ailments are less and less sought. "What affects one part of the body affects the whole" is an expression of the thought of today.

America is essentially a mechanical nation, and the false mechanics of the high heel should appeal to every thinking individual. The principles of the arch apply equally well whether the structure be of stone and

mortar or bone and muscle. The main arch of the foot supports great weight, the entire weight of the body, and it is important that the stresses be properly provided for and that the arch have a firm foundation. The high heel really violates both these principles; it shifts the strains and changes the foundation to an insecure one. Watch a French heel strike the sidewalk. See how uncertain it is when it comes into contact with the walk, see how it "wobbles" before coming to rest, and see how, even then, the lines of support are not the vertical ones of natural posture.

The tilted arch means undue strain somewhere, the indecision of the step means strain somewhere, and the final posture of rest means still other strains brought to bear on muscles not intended for the work. The high heel means disarrangement of the regular lines of support of the body above the foot. Every engineer knows that compensations are necessary. When the elevated heel throws the knee forward to maintain a comfortable angle at the ankle, it is balanced by a backward-tilted thigh, and this again demands a forward-leaning backbone and body. Instead of the upright figure that is normal for the support of the weight, this is upheld by a line broken at three points, a mechanical disadvantage. Be these departures from natural conditions ever so small, they mean unfortunate leverages and the calling into play of muscles not intended for the work.

The toboggan slide of the sole upheld at one end by the high heel needs no discussion for those conversant with mechanics. It is inevitable that the foot, impelled by the weight of the body, slide down the inclined plane of the sole till restrained by the toe-end or the sides of the shoe. If deliberate intention had sought to create continuous inconvenience and final injury to the foot, it could hardly have hit upon a more cunning device for the purpose. It is no use to urge the well-known plea, "They are perfectly comfortable and miles too wide," for the mechanical conditions are there and injury will inevitably follow. Then, of course, there are important medical conditions in distortion and constriction to be considered, in which the foot is not the only sufferer.

It is a well-known military maxim that an army is as good as its feet, and one especial care in the late war was to have the American soldier well fitted to shoes. Some original invention made this possible in a minimum of time. For the first time in the country the scientific measurement of the feet was undertaken for very large companies of men, and from these measurements it developed that half to three-quarters of the men of the country were wearing shoes from half a size to two sizes too small. This difficulty, so far as the army is concerned, was corrected in the interests of efficiency. The reports prove, however, that the men of the United States have not given the attention to their feet that good health and efficiency demand.

The person, man or woman, whose ability to walk is for any reason handicapped, runs the risk of falling into a vicious circle. He loses the amount of ex-

ercise requisite for good health, and ill health tends continually to lessen the already insufficient measure of exercise.

There is much more in the proper shoeing of a nation than appears at first sight. In an enlightened age the feet are truly worthy of sane and proper treatment. Care of the feet demands today in good measure the attention of popular educators in public health. —American Journal of Public Health.

TOCSIN CALLS PHYSICIANS IN FIVE STATES TO WAR AGAINST HEALTH INSURANCE

PHYSICIANS GETTING READY TO ORGANIZE PROFESSIONAL GUILDS TO COMBAT PLANS WHICH THREATEN INCOME

On the result of the November elections will depend the vital question whether America is to make an experiment next year in the European socialistic doctrine of Compulsory Health Insurance. In the states of New York, New Jersey, Illinois, Michigan, and probably Indiana, the American Association for Labor Legislation, the American branch of the European organization through whose efforts health insurance was introduced into Germany, England and other European countries, intends in 1921 to introduce health bills into the legislatures of all the five states named, to which representatives will be elected November 2nd.

The introduction of Compulsory Health Insurance to these five states—if they accept it—means its ultimate nation-wide application, and this in turn means the universal cheapening of American medicine, the lowering of the morale of physicians, the breaking down of professional standards, the loss of millions of dollars in aggregate income and impairment of prestige.

Alarmed by the prospect, physicians in the five states, through their state presidents, are reported to be now planning concerted combative action to prevent the proposed legislation. The first step to this end will be a fight against the election of any candidate for the legislature who is sympathetic with this socialistic propaganda.

To insure this necessary result, the guild plan, organized and so successfully worked in New York State last year, it is believed, will be generally followed.

The guild plan, conceived by Dr. John J. A. O'Reilly and associated physicians in Kings County, of New York State, is an organization of physicians, dentists and pharmacists into a compact professional protective association, with active working committees in each assembly district.

To achieve results personal political preferences are forgotten, the three professions directing their fire against all candidates, Democrats or Republicans alike, who express themselves in favor of compulsory health insurance or refuse to make known their position on this question.

The physician and dentist in contact with his patient,

and the pharmacist with his customer, urge them in their own interest to aid in conserving the higher professional standards and professional efficiency of the doctor, dentist and pharmacist by voting against the candidate who favors health insurance.

As a result of this concerted campaign, twenty or more candidates, unfriendly to the three professions, were defeated in New York last year.

Undiscouraged, the American Association for Labor Legislation has announced its purpose to re-introduce its socialistic bills in the 1921 Legislature of the two latter states and also in Illinois, Michigan and Indiana as well.

The association, which has the backing of rich parlor socialists, social uplifters, settlement workers and professional propagandists, is now more powerfully organized and more abundantly equipped with funds to push its fight than last year—it says it is *going to win* this time.

If the physicians wish to abort this boast, they will have to fight with all their strength—the enemy is out for our scalp.

Realizing this, Dr. Angus McLean, President of the Michigan Medical Society; Dr. W. F. Grinstead, of Cairo, Ill., President of the Illinois Medical Society, and Dr. Charles F. McCulley, of Logansport, Ind., President of the Indiana Medical Society, are now collaborating with New York and New Jersey physicians in the formulation of plans for the establishment of professional guilds similar to those in the Eastern states last year.

If we stand together in this fight, we'll lick them; if we do not stand together, *they'll lick us*. If they lick us, we become time servers and the underpaid lickspittles of a system which has taken the heart out of our fellow practitioners in every country in which it has been employed to date. We are already one of the poorest paid professions in the world; the aim now is to make us still poorer paid—to squeeze us tighter, and while all the rest of the world gorges on the fat of the land, to draft us into the service of mankind for a pittance. In the face of this there is only one sane, logical, self-respecting thing to do—swat the hand that's reaching for our throat. Swat it!

—From *M. P. Quarterly*.

ILLINOIS STATE MEDICAL SOCIETY

SECRETARIES' CONFERENCE

Rockford, Illinois, May 18, 1920

(Abstract.)

The meeting convened at Rockford, May 18, 1920, at 3:00 o'clock, Dr. Chapin, of Jacksonville, presiding.

THE CHAIRMAN: I regret that the President of the Secretaries' Conference is unable to be here today; he is unavoidably detained.

The subject of "How to Improve the Secretaries' Conference" is open for general discussion.

DR. PARMLEY (Williamson County): I have been Secretary of Williamson County Medical Society for about six years.

In my first efforts to get a large enrollment, I visited almost every physician in the county, got better acquainted with him, and collected his dues. I found by going into a doctor's office and having a talk with him it was easy to get him to pay society dues.

The hardest thing I had to contend with is getting the doctors to attend our county meetings. We have been in the habit of having a meeting once a month. I have usually taken the trouble to call them up over the 'phone, one at a time. They will respond in that way many times when they will forget all about the announcement of the meeting that was mailed.

DR. SHASTID (Pike County): I have nothing special to offer in the way of making the county society more efficient. I have tried many different schemes.

The towns are, of course, scattered, and we are dependent upon the conditions of the roads in securing an attendance.

All doctors have an interest in trying to learn new things, and if you can have an outsider of reputation who will have something, at least to a certain extent new, to offer, you can nearly always secure a much better attendance.

A good dinner, with all the members as guests of the members in the town in which the meeting is held, always adds very much to the attendance.

Most men have a liking for a certain field of medicine and will make every effort to be present and hear the paper by the prominent neurologist or surgeon.

The Pike County Medical Society is a very live society for a country organization and where the members are scattered over such a large area. It is the eighth largest county in the State in area, and when you see a man drive twenty or twenty-five miles to attend a Medical Society meeting, it shows that he wants to keep in touch with his profession.

Another thing we have done in western Illinois is to have two or three societies frequently join and have a big day. Now, for instance, the Adams County Medical Society, the Pike County and Marion County, Missouri, Societies all have one big meeting in the summertime. We have had some of the best men that we could find to come and read papers. A great chicken dinner is served, and a strong effort made by the secretaries of all these societies, so that the interest collectively of these four counties, not only helps general medicine, but also helps the individual county, because the enthusiasm there engendered will spread out afterward over the individual county society.

DR. ZELLE (Sangamon County): We have in Springfield a hundred thirty-five members in our County Society. Last year our president insisted on having local talent only, and although Springfield has some very good men and some good talent, about the second meeting we fell flat. I don't think we had a quorum. After the first of the year we were very lucky in electing a president, Dr. Tuttle, who had just gotten back from the army and had a good deal of pep in him.

We decided that we had better get out of town

talent. We began by taking Chicago first, then St. Louis, and we had a wonderful turnout.

Some want to have an evening office hour. I don't believe it pays—that if you work about eight hours a day, it is sufficient.

We started by feeding the men. I would have a dollar and a quarter dinner, and charge a dollar and a half. That gave me twenty-five cents extra. We simply had to do it in order to get the money, because we hadn't the money in the treasury.

We succeeded in getting some pretty good things for them, and the society began to boom. Instead of having about ten members, we had now about seventy-five.

There are two other ways in which we can get up a good meeting. One is by having a fight. Everybody is ready to come if you have trouble. We have had our largest attendance when they wanted to throw somebody out of the society. At elections we always have a good attendance, because there is just enough enthusiasm to want to beat somebody. That gives us probably seventy-five or eighty members.

Another thing that I think would help the society in getting attendance is, instead of \$5.00 dues in the society, it ought to be \$25.00 a year. In that way, have a dinner at every meeting, and no one would want to miss that dinner, because he would have to pay for it. The Optimist and Rotary Clubs are doing the same thing in Springfield. If a fellow knows he has to pay for it, he is not going to miss it. If he has to take it out of his pocket each time, it pinches pretty hard.

* We have had very good success in having clinics, as we have two hospitals, one has two hundred fifty to three hundred beds, and we really can get up some pretty good material. We don't put on these clinics very often, but when we do, we have good ones.

About once a year we usually have a dance, ladies' night, or go out to the parks, which causes a large attendance. During July and August we don't have any meetings at all.

DR. BALL (Adams County): I have tried the idea of the lunch, a dinner, banquet, picnic; it has all worked fairly well.

I have had outside talent; I have had home talent. Sometimes there were large meetings; sometimes they were not so large. We have had scraps, and they have always, unfortunately, been large—both the scraps and the meetings at those times.

There is always a certain class of the society members who will remember the meetings, whether they get a notice or not, and they will be there—you can always count on them.

This last year we are having original articles in our bulletin, and that seems to be stimulating interest. I have invited every member to write some article during the year on whatever interests him.

Another thing—I have established symposiums, and that has seemed to stimulate interest. It brings more of the members in. No one has to prepare a long paper. In that way we probably get ten or twelve in one program and they in turn bring more. Showing

lantern slides and x-ray findings seems to stimulate them, but I do not favor outside talent alone.

DR. KRETSINGER (Ogle County): I have been Secretary of the Ogle County Society for the past fifteen consecutive years. We have a good, live society, and have had for years. They tell me it is all due to the secretary, so I almost have to believe that the secretary has a good deal to do with it. We have had for years the principal men from Chicago as the leading speakers, and then we try to get one from the larger towns nearby, such as Rockford, or Freeport, or Dixon. I think the success of our society is dependent largely upon a good program.

I find that making good collections, trying to collect from every member in the society, is an important point. If a member does not respond, I write to him, first; then I get my car and go after him, and for years we have had good collections—in fact, nearly every member of our society is a paid member. When a member knows that he has paid his dues, he has more responsibility and will attend the meetings better.

We never had any success with banquets or dinners.

The way to have a big, successful society is to work hard and keep right at it. I send cards not only to our own physicians; but I send them to Rockford and, in fact, every town around, and I keep at that every year. It is also a good thing to telephone them when you are going to have a meeting, and that you would like to have them present.

DR. PERISHO (La Salle County): We have a large county, with three cities—Ottawa, Streeter and La Salle. La Salle includes three towns itself, called the Tri-Cities, La Salle, Peru and Oglesby. Our county has good roads, has good interurbans. It is not difficult to meet at the different towns, because they are very accessible by automobile or interurban, according to the weather. Each of our cities has its local society, which meets twice a month; we have very good programs, and usually a banquet once a year. We have two county meetings a year, spring and fall.

We have probably about one hundred twenty physicians in the county. Nearly all the members in the county are in our society excepting a few of the old-timers that are practically retired.

Often the papers read at the local meetings are held over and read to the county society, which is good practice and good training. Our main draw-card, though, is foreign talent. It is a very easy matter to get some of the Chicago men to come. We pay their traveling expenses and try to show them a good time. At least once a year we try to get around and give each class of fellows something of interest to them.

I have a program made out in regular style and try to get it to them within less than a week before the date of the meeting. The newspapers are always glad to get these notices.

We have two objects in attending the societies. First, we always consider the scientific program which is of importance, but I think equally important is the good time and social fellowship we get.

One of the best assets to a secretary, I think, is a good office girl. My office help has really been the secretary. She keeps everybody in line and sees that the dues are paid up. If some fellows get behind, she gets after them. All I have to do is attend the meetings and present her work.

DR. DARGAN (Livingston County): I believe Secretaries Shastid, Ball, Perisho and Zelle have stolen all my thunder.

We have found in lodges and meetings the last year or so, since the wave of prohibition has come in, that the only way to arouse good fellowship is to provide eats and music.

We had a live President the last year and we determined to use some Hearst advertising methods on the county society. We got some very good out of town speakers and offered a banquet to the doctors of the county. We sent them a regular letter and enclosed a return postal card on which these doctors were to let us know whether they were coming or not, so that we could put enough water in the soup. Thirty-five out of the sixty-five doctors of the county immediately sent in an answer that they were coming in. To those who did not answer in two or three days were sent a follow-up, a postal card, asking if we could have their plate warm. Twenty-two more doctors signed up, or at least let us know, and out of the sixty-five doctors of the county we had forty-four at dinner, and we had fifty-one at the meeting out of the sixty-five doctors in the county, which I think is the third largest in the State. I believe in advertising methods to get out the doctors. If you can't use the 'phone on account of the great distances between towns, you must use, as I say, Hearst advertising methods, either in follow-up postal cards or in letters.

If your county society can't afford a large meal, or the doctors in the town in which the meeting is being held cannot afford a large meal, if you only call it "eats," furnish them with coffee and sandwiches, you will get a large number of doctors out.

DR. FRECH (Greene County): The whole medical organization of the national organization, of the state association and of the county society depends upon the county secretary of each component county.

What is the matter with the county organization in my mind is not with the county organization; it is with the secretary. The secretaries are not alive; they are not up-to-date; they are not working; they are not trying. Then, how can you expect your membership to respond to your county meetings as well as to your state meetings?

Dr. Ball stated that she wanted a new idea. I think I have it. Our society has in the past given over almost all of the time exclusively to the scientific end of medicine, which is, in a way, all right. But the chief trouble with our society is that they do not give over enough time to the business end.

In addition to touching the stomach, a good way is to touch the pocket-book—not literally, but to show the physicians wherein it is to the interest of his own pocket-book if he will attend his society meetings.

We have medical societies galore, our national societies, our county societies and state societies, but we haven't a real medical organization, not one. It is a medical organization in name, and in name only, and when it comes to sticking together, gentlemen, you should be more like the miners and the railroad men. That sort of thing is going to come, and must come if the physicians expect to get their rights. If they don't expect it, osteopaths, chiropractors, Christian Science healers, and all these other quacks will step in and take their practice. We have got to lobby together before the state legislature and get our rights and stand up for them.

The county society is the place to bring up these things. I have never yet had to go out and ask for a quorum in order to hold a business meeting, or a scientific meeting of the society. We always have a fairly good attendance, considering the size of the society.

In our town we also have a medical society which is small, but we are certainly well organized. We have our lists of people who won't pay their bills, and we stick strictly to those lists. We have a cash list of those people who owe two-thirds of the doctors in the community, and they absolutely cannot get service from a doctor without paying cash or without going back to the county to stand good for that bill.

We also have in the society a suit list. For instance, if a patient should be sued by one physician and that suit is not settled, or that patient schedules on that physician, that patient cannot get medical attendance from any physician, absolutely, until that suit is settled to the satisfaction of the doctor suing. That has been tried several times and has always worked out to our advantage. We have been threatened with suit and all sorts of things, but that is all that has ever happened, just threats.

We also have a list which is called a no service list, and consists of those people who owe every doctor in the community. Now, you would be surprised that there are people who owe every doctor in the community. That sounds unreasonable, but it is true, and these people are put on what we call a no service list, and when they call for help the only way that they can obtain a physician in the community is to get the supervisor of their township to stand good for that bill. They are not trusted. That is the only way, absolutely. That may sound harsh to some of you physicians. It did to us at first; but it has caused a great awakening in our local city society, and it is not going to be very long until the same methods are going to be used in Greene County.

THE CHAIRMAN: I now have the pleasure of introducing one of the most efficient secretaries, one of the most live, wide-awake men in professional affairs in the state, if not in the United States. I take pleasure in introducing the Secretary of the Secretaries' Conference, Dr. Doan of Scottsville, who will read a paper on "The Efficient Secretary."

THE EFFICIENT SECRETARY

T. D. DOAN, M. D.

MACOUPIN COUNTY

There are so many forces which, combined, work for efficiency, besides the natural personality of the individual, that it is rather a difficult task to indicate in a brief address which are the qualities that go most toward the successful work of the Secretary of the County Medical Society.

The first of these, and probably the most important, is that he shall be interested in the work of making the local society a success in all things which are required to make a successful society.

In order that he may be interested in the success of the local society, he should have the confidence of both the society and himself, his efficiency and his interest in the affairs of the society, that he will continue to serve in that capacity more than just one or two years.

The efficient secretary will give an immediate reply to all inquiries from members and officers of the society, and in all communications requiring an answer will so word them that the recipient of the letter will feel impelled to give him an early reply to his inquiry.

The Secretary of the County Medical Society who has attracted any particular attention, even from the members of his local society, is not the doctor who has time hang heavy on his hands, but rather he is the physician whose time is so completely occupied with his professional work that inquiries to any replies which he gives must be immediately dispatched or never receive his attention again.

One of the greatest forces for the success, and the one which has been used largely by many of the most successful secretaries, is the regular publication of a bulletin. This bulletin will be issued immediately preceding regular meetings of the society and will contain, besides the program for that meeting, other items of interest to the members, besides bits of information and news items concerning the medical profession in general.

The Bulletin may be used very effectively in creating an interest in the attendance at the meetings of the society.

The efficient secretary will devise some means of having a full attendance at all regular meetings of the society.

It is a well known fact that the pneumogastric nerve has communication directly with the heart and the stomach, though this fact is often overlooked by those whose efforts are being used in promoting the interest of the local Medical Society.

The housewife in every well organized household is so well aware of this fact that she will not consider asking for a new Easter bonnet or an expensive gown before the evening repast; but she prepares a sumptuous meal, being careful to have prepared for his especial benefit the delicacies of which he is most fond, and the partaking of which acts as a wonderful *sesame* to the husband's otherwise closely tied purse-strings.

In the statement in the old school physiology "Animals will travel long distances to obtain salt," the word "salt" might very readily be changed to a "good meal."

In the practice of medicine, it is not how scientific our technical knowledge in medicine may be, or with what wonderfully complete technique we may perform our surgical work, but it is the results of whatever professional work we may do which carries weight with the patient and his friends.

Upon the Secretary devolves the important duty of not only being the correspondent of the local society, but also the efficient Secretary will create an interest in the meetings of the Society, whether it be through the influence of the "Pneumogastric Nerve" or any other *Nerve* which he may possess.

DISCUSSION

DR. SHASTID: I don't know that he has ever been a county secretary, but I see with us the President-elect of the Illinois State Medical Society, and I think I voice the sentiments of the conference in asking if he has anything to say that will be helpful in our work.

DR. GRINSTEAD: I would like to say, first of all, that I did not expect to talk on this occasion. I have talked before nearly every meeting of this Secretaries' Association, however, during its existence. Those old regulars here like Dr. Doan will recall that fact. I have done so because I think the large share of the success of the unit of the medical organization, which is the County Society, depends upon the secretary. All my professional life I have attended medical organizations all the way from the county up to the national. I joined a medical society even before I had opened a doctor's office. I suppose I might be called a medical society rounder.

It didn't take me very long to learn the importance of the work of the secretary. He is the most valuable man in your society, even if he does not have the position that is supposed to carry with it the most honor. County Medical Societies have a way of learning who their real live-wire is that is interested enough and active enough to keep pushing his organization all the time.

I was impressed with what I heard said a few minutes ago about the County Society Bulletin. There is no doubt that many medical societies have had a lot of ginger injected into them; they have had large additions made to their membership, by the publication of their proceedings in these little news items. I suppose some of you have seen the little St. Clair County Medical Society Bulletin, which has been so ably edited and published by our old stand-by in the State Society, Dr. Lillie. I suppose many of you have also seen that little bulletin of the Madison County Medical Society, published for many years by our State President, Dr. Fiegenbaum, who retired last year.

They are interesting little pamphlets. It does not take much time—just one evening after you are through with your work, to look them over, and you will see every little thing of interest that is going on

in your county in the medical line. I believe more counties should adopt the plan of getting out a little bulletin. Dr. Fiegenbaum will tell you it is not hard to do, and he will tell you how to do it. I thank you, gentlemen.

DR. HAWTHORNE (Piatt County): I can't speak from any experience. I was just elected. Our society in Piatt County has been pretty dead. They had a meeting a year ago in March, and did not meet again until last month. They were having a tubercular clinic, and I talked to some of the fellows and got them to attend a medical meeting at the same time. They elected me secretary.

I am going to put in force a number of the ideas I got here this afternoon. I am going to ask the secretaries of the counties where they issue bulletins to put me on their mailing list.

On the morning of the evening we hold our meeting we will telephone them all, and I think we will give them a little dinner, even if we have to levy a special assessment.

I don't know whether the members of our society would stand twenty-five dollars; but they will probably stand ten or fifteen, and if they have paid in that much they are sure to come to eat with us. I think the idea of the secretary from Springfield is a very good one.

DR. BALL: The committee have chosen for the next conference, as President, Dr. H. A. Chapin, of Jacksonville, and as Vice-President, Dr. L. O. Frech, and as Secretary, the secretary now presiding, Dr. T. D. Doan.

DR. SHASTID: I move that those names be elected. Seconded and carried.

DR. DOAN: Before a motion to adjourn, I would like to say this: Dr. Grinstead gave you a nice talk, but he forgot one thing. He forgot that the Macoupin County secretary has been issuing a bulletin for many years, and perhaps that has something to do with the success of Macoupin County. I will be glad to see that you are sent one of those each two months if you leave your name and address and care to have that inflicted upon you.

Adjournment.

THE CLIMACTERIC IN MALES AND CHANGES IN PROSTATE SECRETIONS

About ten years later than in women, conditions develop in men which may be called analogous to the climacteric in women. It is not so conspicuous because the functions of spermatogenesis does not fail unless life is extremely prolonged and sometimes not then.

The structural basis responsible for these climacteric changes is found in the prostate gland which shows loss of secretory power and excretory activity. As a consequence, there is less resistance to infections and to the tendency towards morbid changes in the body such as are found in arterio-sclerosis, inter-

stitial nephritis, diabetes. (Ristori.) *Rivista Critica di Clinica Medica*. (5/3/19.)

EFFECT OF PROSTATE FEEDING ON THE GROWTH AND DEVELOPMENT OF TADPOLES

Thyroid feeding stimulated metamorphosis and retarded growth.

Thymus retarded metamorphosis and stimulated growth. Confirmed and extended by Rogoff.

Effects of prostate feeding manifested itself in changes both in growth and differentiation of the larvæ. As in the case of thyroid, it was found that feeding with prostate tended to hasten the differentiation of metamorphosis of the tadpoles into frogs. Noticeable in some cases even after four days. The effect was not so rapid, but it could be fed continuously, while thyroid required intermittent feeding. Prostate did not cause shrinkage of size, but showed a tendency to stimulate growth above normal.

It was found that prostate feeding tends to stimulate both growth and metamorphosis of the larvæ of frogs. The observations speak in favor of an internal secretion of the prostate gland. (David I. Macht. *J. of Urol.*, April, 1920. James Buchanan, *Urol. ins. and Phar.* Johns Hopkins University.)

DETERMINATION OF VITAMINE CONTENT

The author states how desirable it is to be able to determine definitely, quickly and quantitatively, whether a substance or preparation contains vitamins or not. Brearandat and others have asserted that secretin and vitamine are identical; if this is the case, the amount of pancreatic juice which is secreted in a given time after the injection of the substance to be examined might be an indication of the quantity of vitamine contained in that substance. For we know, from experiments of Bayliss and Starling, that injections of secretion do cause such an increase. Dogs were used for the experiments; these were narcotized with morphin, a duodenal fistulous opening was made and a cannula passed into the pancreatic duct. Secretin was injected into the jugular, and, after its stimulating action had ceased, a filtered extract of rice bran vitamins was injected, and, in one experiment, a final injection of a further amount of secretin. These experiments show that the effects of secretin were different from those of vitamins; therefore, the two substances are not the same, the former stimulating the pancreatic secretin, the latter not doing so.

The author also demonstrated that the intravenous injections of a watery solution of a filtered bran extract caused almost immediate death of animals; this poisonous action was due to the contained potassium salts; and, therefore, should it be decided to inject vitamine solution intravenously for certain purposes, these should be deprived of their potassium salts. (Meded-Genees Lab. de Weltevreden. 1918. 3rd ser. A, Nos. 1 and 2, pp. 99-104. C. J. Jansen.)

Public Health

ANTHRAX FOUND IN SHAVING BRUSHES

A case of anthrax, bacteriologically verified, appeared in an adult male residing in Ridgefield, Ill., about August 15. Reports of this case did not reach the State Health Department until September 9th. An investigation immediately instituted by the Director indicated the possible source of infection to be a newly purchased shaving brush. The suspected brush together with a lot of others from the same consignment were confiscated and subjected to examination in the State laboratories with the result that anthrax organisms were positively demonstrated to be present in most of the brushes of the lot picked up.

Steps were at once taken to remove from sale and to recover from purchasers all brushes of the infected lot. Acting on information secured from the wholesaler in Chicago and the manufacturer in New York, notice was transmitted to the health officers of sixteen states in which these brushes had been distributed. From Illinois retailers in Chicago, Crystal Lake and Chicago Heights, a number of brushes were recovered which have since been subjected to laboratory tests with the result that anthrax organisms were found, thus confirming the earlier findings.

These developments have aroused country-wide interest and have lead to a concerted movement on the part of State and local health authorities to safeguard the public against infection with anthrax from animal hair. In Illinois as in other communities regulations have been issued requiring (a) immediate reports of cases of anthrax, (b) investigation of all cases and possible sources of infection by local health officials, (c) prohibition against the use of animal hair, wool or hides in the manufacture of any article, and the sale of any article into which any animal hair, wool or hides enters, unless same has been sterilized by a process prescribed or approved by the State Department of Public Health.

WARNING ISSUED

In view of the increasing frequency of anthrax in humans traceable to infected hair, health authorities urge the public to observe the following precautions:

1. Before using any newly purchased shaving brush, tooth brush or hair brush, sterilize the brush by immersion in a ten per cent solution of formalin for at least six hours.

2. Inasmuch as it appears that the infected brushes are of the very cheap variety, in most instances not bearing the manufacturer's name or trademark, it is advised that purchasers of brushes be particular in their selections, taking only those bearing the manufacturer's trademark and preferably those accompanied by a certificate attesting that the brush has been sterilized by a method approved by the government authorities.

EXAMINATION OF PUBLIC WATER SUPPLIES

The Director of the State Department of Health has recently transmitted to authorities in charge of

all public water supplies throughout the State, a communication advising them that under the rules of the United States Public Health Service no water can be supplied to common carriers in interstate traffic until the water supply has been examined and certified by the State Department of Health.

Officials in charge of public water supplies are also advised that the Division of Sanitary Engineering of the State Department of Health stands ready at all times to make examinations of such water supplies, without cost, leaving no reasonable excuse for the failure on the part of public officials or private water-works authorities to keep the public fully advised at all times as to the safety of the water furnished. The Department of Health is also prepared to assist municipal authorities or operatives of water-works, by inspections and plans for alterations, changes or new construction in their plants.

COMMUNICABLE DISEASES IN ILLINOIS

During the past month four cases of poliomyelitis, with two deaths, have been reported in Whiteside county. At Fountain Green, Hancock county, there has been a serious outbreak of para-typhoid fever, traced to ice cream served at a public gathering and in which over ninety persons have been afflicted.

At Westville, Vermilion county, there has been an outbreak of typhoid fever, affecting thirty-five employees of one factory. In these epidemics of typhoid and para-typhoid fever, as in the previous epidemic in Whiteside county, it has been noted that returned soldiers, who were vaccinated against typhoid and para-typhoid in service and other persons who have had immunizing vaccines, have remained free from the disease.

STUDY HEALTH ACTIVITIES

The Russell Sage Foundation of New York has announced its intention of sending a representative to Illinois during October to make a special study of public health activities of the State Department of Public Health and of extra-governmental agencies, with special attention to the crippled children's clinics of the State Department of Health, to the child welfare conferences which have been developed throughout the State through the Division of Child Welfare and Public Health Nursing, and to the tuberculosis clinics conducted under the auspices of county medical societies, with the cooperation of the Division of Tuberculosis of the State Department of Health and the Illinois Tuberculosis Association.

RULES FOR THE CONTROL OF TRACHOMA

On account of the very large number of cases of trachoma throughout certain sections of the State, and the confirmation of the general prevalence of the disease, derived from the investigation made by the State Department of Health and the State Department of Public Welfare with the cooperation of the Illinois Association for the Prevention of Blindness, the State Department of Health has promulgated the following rules for the prevention and control of trachoma, effective on and after October 1, 1920:

"Rule I. *Reports.* Every physician, nurse, or other

attendant, superintendent of any hospital, asylum, orphanage, jail or similar institution, teacher in any school, proprietor of any drug store, proprietor of any hotel, lodging or boarding house, parent, guardian, householder, or any other person having knowledge of a known or suspected case of trachoma, shall within twelve hours of such knowledge of such known or suspected case of trachoma coming to his notice, report the same in writing or by telephone to the local health authority. Every case reported by telephone shall be followed with a written report within twelve hours. Upon receipt of such report the local health authority shall within twelve hours forward copy of the same to the State Department of Public Health, Springfield, Illinois. Every case developing on the premises subsequent to the first reported case shall likewise be reported.

"Rule II. *Information to be given in report to health authorities.* The written report of a known or suspected case of trachoma, required by these rules, shall be set forth at least the following information: (1) place and date of report; (2) name, exact address, age, sex, color, and occupation of the diseased person; (3) number of children and adults in household; (4) school attended or place of employment, giving names and employers and mentioning particularly any engaged in handling milk or foodstuffs; (5) types of disease; (6) date of onset of illness; (7) precautions taken to prevent spread of infection; (8) name and address of person making the report.

"Rule III. *Isolation.* Unless the person suffering from trachoma is under the care of a physician and complies with the rules governing the control of the disease, he shall be isolated during the persistence of the inflammation of the conjunctiva and discharges therefrom.

"Rule IV. *Advice to be given to patient and contacts—and by whom.* It shall be the duty of the attending physician to advise the patient, the patient's family and any other members of the household, of the nature of the disease, the means whereby the spread of infection may be avoided and of the provisions of these rules. In the absence of an attending physician it shall be the duty of the local health authority to impart this information and advice to the persons specified above.

"Rule V. *Minimum precautions to be observed.* At least the following precautions must be observed: Patients must wash their hands frequently and as often as their hands become soiled by discharges from the eyes. An ample supply of towels, basins, water and an approved disinfectant must always be on hand for the disinfection of the hands of the patient.

"All discharges from the conjunctiva shall be received in cloths or paper and immediately destroyed by burning. Such cloths or paper may be kept in paper bags until the bag and contents can be destroyed by burning. Towels, handkerchiefs, etc., that cannot be burned shall be disinfected by boiling for twenty minutes or immersion for five minutes in a 5 per cent cresol solution.

"Rule VI. *Investigation of Case.* The local health

authority shall make diligent investigation as to the source or sources of infection of all cases of trachoma reported to him. If the source or probable source is discovered, the State Department of Public Health shall be immediately apprised of the facts. However, in no case shall the original report of a case of trachoma be delayed by reason of such investigation.

"Rule VII. *Removals.* No person having trachoma in its communicable stage shall move, or be moved, from one health jurisdiction to another without first securing permission to do so from the local health authorities of the place from which and to which removal is to be made, or from the Illinois Department of Public Health. Such permission may be granted under the following conditions:

- (1) Removal can and will be made without endangering the health of others, either in transit or at destination.
- (2) Patient agrees to report in person to the local health authority immediately upon the arrival at destination, or agrees to place self under the care of a reputable physician who shall report the presence of such patient to the local health authority.

"In the event that it is necessary for a patient to go at intervals from one health jurisdiction to another for treatment, the permit issued in accordance with the foregoing provisions may authorize such necessary and frequent removals; one permit and one report to the local health officer at destination being sufficient under such circumstances.

"Rule VIII. *Exclusion from School, Public and Private Gatherings.* No person suffering from trachoma in its communicable stage shall be permitted to attend any public, private or parochial school or any public gathering until there is no longer any discharge from the eyelids. Readmittance at school by certificate.

"It shall be the duty of the principal or any other person in charge of any private, public, parochial or Sunday School to exclude therefrom any child, teacher or other persons afflicted with trachoma until such child, teacher or other person afflicted with trachoma shall have presented a certificate issued by the local health authority, if he be a physician, or by the attending physician, countersigned by the local health authority certifying that such child, teacher or other person is non-infectious."

Correspondence

BREACH OF FAITH IN THE APPOINTMENT OF A. M. A. SUBCOMMITTEE

To the Editor: The breach of faith in the appointment of the chairman of the subcommittee on Social Insurance of the Council on Health and Public Instruction which you condemn in your July issue is no less glaring than the appointment of the chairman of the Narcotic Drug

Section of the same body. Both of these appointments were made by Dr. Alexander Lambert who, the evidence shows, is more vitally interested in Narcotic Drug Legislation than he is in legislation on Social Insurance, his association with Mr. Charles B. Towns, the self-proclaimed father of drug laws in this country being of a more intimate character and of longer duration than his connection with Mr. Rubinow, the pioneer in this country of the scheme of Compulsory Health Insurance.

The chairman of the special Narcotic Drug Committee of the American Medical Association was compelled to admit his complete ignorance of Narcotic Drug Addiction at the hearing of the Cotillo Drug Bill before the New York Legislature, although this proposed legislation was based on the findings of his committee whose recommendations were subsequently presented to the committee on Health and Public Instruction of the American Medical Association and adopted without discussion by this body. Appearing before the Committee of the New York Legislature in co-operation with the chairman of the Narcotic Drug Committee of the A. M. A. was an assistant United States District attorney and attorney of record in the prosecution of physicians in New York for alleged violation of the Federal Drug Laws.

Although appearing, according to his own statement, in his individual capacity in advocating this form of State legislation, this officer of the Government gave as his reason for not prosecuting other offenders that the time and labor consumed in working up the cases against the doctors whom he considered the chief offenders prevented him from doing so.

His theory is in accordance with that promulgated by Dr. Alexander Lambert in his address on assuming the office of president of the A. M. A. in which he accused the renegade doctors of being the principal violators of the Harrison Law in connection with unprincipled drug-gists. As you know, the council on Health and Public Instruction of the A. M. A., in its report to the House of Delegates at the New Orleans meeting condemned the Harrison Drug Law and asked its revision, and said further that the drug traffic grows despite legislation and that the Harrison Act does not fulfill its intended purpose. Likewise the report states that blackmail

and official corruption has followed in the wake of this legislation.

This is especially true in New York City, where the system of registration of drug addicts is in effect under a ruling of a narcotic drug committee. After the legislature had repeatedly refused to write its provision in the straight drug law in the recommendation for devising an effective way for the government control by inspection and distribution by the U. S. Public Health Service of opium and derivatives made by this committee, no mention is made of the compulsory hospitalization of all drug addicts which is the logical sequence of the committee's condemnation of the ambulatory treatment of drug addiction under all conditions. The fact should not be lost sight of, however, that this is the final and most ambitious attempt to put into practice by the aid of the United States Government of the institutional treatment for drug addiction to the exclusion of all others which was first promulgated in the magazines and in the halls of legislation by Mr. Charles B. Towns, the originator of the Towns-Lambert treatment for what he once called the "drug habit."

JOHN P. DAVIN, M.D.

117 W. 76th St.

WHICH IS IT TO BE—THE ESTHETIC IDEALS OF HIPPOCRATES AND GALEN OR COMPACT BUSINESS ORGANIZATION?

Chicago, Ill., September 1, 1920.

It is quite obvious to everyone who read in the bulletin of August 28th the feeble protest quoted from "Manufacturers News" of August 12, that the Contract Practice Committee and especially its progressive Chairman, is treading upon some very tender toes. It must be a new order of things, a medical revolution as it were, that prompts a "mere doctor" to demand a just fee for his services to a "*poor Corporation*" or Insurance Company and the end is not in sight.

The time is near when the pitiful cry will be heard that a "mere doctor," a member of the noble profession of medicine, will demand more than \$100 a month for his time and knowledge, a salary that a laborer on the street would scorn. Then we will be flayed with the scathing denunciation that we are a medical autocracy, controlling the health, life and destinies of men. Yes,

an autocracy whereby we will be able to obtain a livelihood and support our families and educate our children and give better, more detailed and scientific care to our patients.

Our clientele will expect and deserve more time and consideration from us if they expect to pay \$5.00 for our call instead of \$1.00 or \$2.00. I am only surprised that we have waited so long to bring about this condition. For anyone who has spent "\$7,500 and six years of hard study" to attempt to hoodwink the thoroughly abused profession of Chicago and Cook County by an article so childish and absurd is amusing to us who know what motives prompted it and from what sources it emanated.

I am not at all certain that the esthetic gentleman who signed it even read it, the annual salary being the "big stick" which prompted his estheticism. It is all very well for those of us who have a guaranteed income without much effort except to sign a letter intimidating the general practitioner against charging some industrial insurance company more than \$1.00 for a \$3.00 or \$5.00 case to speak of the ethics of the profession and to caution us who are not so fortunately situated against participating in politics, organizations, or business principles on the plea that we are "professional men" and must not stoop to anything unworthy of our noble profession.

It is just such individuals as these that made possible the defeat of proposition No. 300 before the Constitutional Convention. Of course, it is unethical for us to insist upon justice to ourselves, so we must submit quietly and "with dignity," but we are surely aware that all of the quacks from Christian Science down were there and, of course, they won. Why? Because too many of us are just like the esthetic gentleman, who presumes to tell us just what are, and what are not medical ethics.

Of course, it is exceedingly unfortunate that this individual could not have lived in the time of Dr. McLure, then his esthetic soul could have reveled in "Beside the Bonnie Brier Bush," for at that time no doubt the sordid things of life did not make such great demands upon the purse of the noble profession, for we didn't have automobile and gasoline expense, nor did we pay \$150.00 per month for a very ordinary place in which to live.

He says further, in his sublime and conceited manner, that after all the sociologists, labor leaders, etc., were called upon for advice in the obnoxious compulsory Health Insurance bill introduced into the British Empire by Lloyd George, then and then only were the members of the noble profession consulted. The medical profession was not consulted, it was *ordered*. Why? Because Lloyd George did not want their advice on a measure which must, perforce, decrease their earning capacity, and he knew it would not meet with their approval, and he knew, furthermore, that it was a grave injustice he was doing them.

The only reason he called in the labor leaders was the fact that union labor is a power to be reckoned with because they are *organized*, and would reject with all their organized might anything distasteful to them from an economic standpoint and, of course, the noble profession with their loose methods and their loose organization had to swallow it and smile.

The ethical and esthetic gentleman in his article in the Manufacturers News certainly was wise in one instance, i. e., he knew the profession he criticized, he knew that he could get away with anything so long as he was talking to, or writing about doctors. I suppose he felt secure when he signed that absurd article purporting to come from one of the noble profession which he honors, that there would be no objection simply because we are a spineless lot of pikers without the courage to reply. Now for the new order of things whereby a man may obtain a livelihood by charging a "sordid" fee commensurate with his services.

The gentleman says further with the wisdom of the oracle that we were not forced to study medicine and are not forced to continue in practice unless we choose. Beautiful, lovely, isn't it? But what about the "\$7,500 and six years' hard study?" Has the gentleman who is opposed to the materialistic a suggestion whereby we may have our money refunded or the best years of our life returned? Of course, he has not. Neither is he in a position to speak of "democracy" or "high ideals" of the profession.

I sincerely wish and earnestly pray for the medical "unfair list," and "the black list." Then we will have an organization of business men, with business principles, then the *charity* patient will not visit the clinic in a Pierce-Arrow

and "noble Professor" come in a fenderless Ford. Did Hippocrates or Galen with their legendary ethics have a second cloak to wear? I'll bet my life they did not.

But what is the use? The members of our noble profession won't even attend a meeting where their own welfare is to be discussed.

Sincerely,

JOHN F. VAN PAING, M. D.

25 E. Washington Street.

Society Proceedings

CHICAGO OPHTHALMOLOGICAL SOCIETY

Meeting of Dec. 15, 1919, Continued

RESULTS IN ACUTE GLAUCOMA

Stock (K. M. F. A., Vol. 50, II, p. 462, 1912).
Meller (K. M. F. A., Vol. 47, II, p. 641, 1909).

Author Cases S. M. A.			Vision		S. M. A. Improved		S. M. A. Stat'y		S. M. A. Worse	
4	0	10	Lt.	Perc. to hand						
				movements . . .	0	0	0	4	0	3
3	4	12		Hand movements						
				to 1/60	1	3	4	2	0	5
2	1	21	1/60	to 6/60 . . .	2	0	18	0	0	3
2	0	31	6/60	to 6/18 . . .	1	0	31	1	0	0
3	0	9	9/18	to 6/12 . . .	1	0	9	1	0	0
0	3	11	6/12	to 6/9 . . .	0	3	11	0	0	0
8	3	9	6/9	to 6/6 . . .	3	0	6	2	2	3*
22	10	103			8	6	79	10	2	14

SIX CASES SHOWING INEFFICACY OF MYOTIC TREATMENT IN GLAUCOMA

DR. ANDREW M. CARR (by invitation) reported the following six cases:

CASE I. RIGHT AND LEFT SIMPLE NON-INFLAMMATORY GLAUCOMA

H. T., aged 47. Days of blurred R. V. and halos for 14 months. Constant poor right vision past 2 months. R. V., O. 1; L. V., O. 8 + 6. Complete and total cupping of right disc but none of left. Fields much narrowed. Schiotz R. 37, L. 18; under eserine R. 8, L. 11. Status maintained well for 3 months, then treatment was neglected for 5 weeks and R. V. fell from 2/10 to 4/200 and the fields narrowed to about half of what they had been, yet the tension under eserine remained below 30. Four months later it had become impossible to keep the tension under 30 by miotics. Trephining with iridectomy had controlled the tension for the last 9 months.

CASE 2. RIGHT AND LEFT PRIMARY NON-INFLAMMATORY GLAUCOMA

Mrs. K., aged 74; observed 38 months. Pupils kept small at all times; right disc complete and totally cupped (3 D.). Right tension could not be controlled, ranging from 30 to 55, Schiotz; despite this the right

fields held for 11 months, though much narrowed, but decreased to fixation point in the succeeding 9 months. Right vision held at O. 1, for 19 months, then suddenly dropped to shadows in 21 days under the continued miotic treatment and had never improved. Left tension was controlled at all times, and left vision and a normal form field had continued throughout.

CASE 3. RIGHT AND LEFT SIMPLE NON-INFLAMMATORY GLAUCOMA

McC. The left eye had been trephined 6 months previous to their seeing her. Miotic treatment had been carried on for 26 months. The left tension had always been below 15. L. V. had decreased from 0.4 to 0.1 and the left form field from nearly normal red size to 30° horizontally and 10 to 15° vertically, while the red field had decreased from about $\frac{1}{4}$ normal to a mere dot around fixation point. It might not be fair to attribute the loss of this patient's vision to miotic treatment, but miotic treatment was continuously and faithfully used for 26 months, and at least its inefficacy was shown.

CASE 4. RIGHT SECONDARY, LEFT PRIMARY GLAUCOMA

Mrs. J., Jewess, aged 58. Observed 7 months. Pupils too large, but controlled by eserine. Chambers very shallow, discs normal, fields definitely limited. At first Schiotz R. 30, L. 22. Patient diluted her miotics, resulting in dilation of right pupil and acute attack with tension reaching 88. It could not be controlled, iridectomy failed, and enucleation was done. An acute attack in the other eye from homatropin, by mistake in clinic, was controlled by miotics with no loss of vision, yet left form field decreased and the red field was found narrowed to $\frac{1}{8}$ of the normal. L. V. was now 1.5 and yet it was felt that some operation was advisable.

CASE 5. RIGHT AND LEFT PRIMARY GLAUCOMA WITH ACUTE INFLAMMATORY ATTACKS IN EACH EYE.

Mrs. B. This patient was first seen 59 months ago; during this time she had been absent from the clinic and had stopped treatment for from 6 to 14 months on three different occasions. Her right tension was frequently above 30, at times up to 50; still the R. V. held for 31 months. Then in a period of 14 months (while she was absent) dropped to light perception in the temporal field only. The left tension had always been within normal limits, and L. V. had held L. O. corrected.

The sixth case which Dr. Carr reported was the same one which Dr. Brown reported of "Continued Loss of Vision in Simple Glaucoma Despite Tension of 15 After Trephining."

DISCUSSION.

Dr. William H. Wilder stated that in the study of a case of chronic glaucoma it was as important, if not more so, to consider carefully the condition of the peripheral vision, as it was to consider that of the central vision. Unless this was done one might frequently fail to recognize changes that were

going on as a result of the increased intraocular pressure. This term "intraocular pressure" as urged by Elliott expressed more accurately the condition than "tension," which indicated the hardness of the eyeball as determined by palpation or the tonometer.

In chronic glaucoma, as some of Dr. Carr's cases illustrated, central vision was frequently well maintained, while peripheral vision was gradually lost, because of the pressure of the retinal fibers against the firm unyielding scleral ring of the optic disc, or that combined with the injurious influence of the pressure upon the retinal and choroidal circulation. For this reason, if glaucoma conditions were present, the danger was probably greater in the eye that had a large physiologic cupping of the optic disc. In such a case the increased intraocular pressure might force the vitreous back into this normal depression and more quickly make an abnormal cupping with consequent impairment of peripheral and even central vision.

It was not uncommon to see cases, especially of the acute variety, with vision almost lost, restored to normal vision by timely operation for relief of the pressure.

In addition to the observation of the peripheral vision with the perimeter, it was valuable, as emphasized by Elliott in his recent work, to study the condition of the normal blind spot of Mariotte. The observations of Bjerrum, Seidel and others had shown that an enlargement of this blind spot frequently could be demonstrated in the early stages of glaucoma and as the condition progressed the enlarged blind spot tended to merge with other blind areas in the field. The importance of this as one of the diagnostic measures should not be disregarded.

The contention of Schweigger and Schnabel that many of the so-called simple glaucomas were optic atrophy and not real glaucoma had not been definitely proven, and tonometric examination of such cases revealed that the tension in such cases might be observed to be elevated at times. However, the presence of spaces in the nerve head, such as Schnabel had described, might allow a lower intraocular pressure than usual to cause cupping of the disc, and exert an effect on central as well as peripheral vision. Some such process might account for the peculiar variations from ordinary types, that were described in some of Dr. Brown's and Dr. Carr's cases.

As to the use of miotics, it should be recalled that those who advocated their use to the exclusion of operative measures urged that the miotic treatment should be followed in cases that showed no active or congestive stages. As he recalled the opinions of Posey and other advocates of the miotic treatment, if the case showed distinctly congestive phases, it was not to be considered a simple glaucoma, and should be treated by other methods as well. But even in the so-called simple cases there might be variations in the degree of the intraocular pressure and this might sometimes be demonstrated by repeated tonometric observations. It was true, that the normal variations and the normal limits of intraocular pressure had not as yet been positively determined, but the tonometric readings might be relied upon to determine the variations from time to time in any one individual and whether or not they approximated the supposed normal.

A safe working rule might be to rely on the miotic treatment only as long as it kept the intraocular pressure down to the normal as indicated by the tonometer and as long as the central and peripheral vision were maintained and the blind spot of Mariotte showed no marked increase. If the case showed any congestive phases and the tension could not be held to normal and the peripheral vision showed decrease, the patient should be informed of the danger and more radical procedures should be resorted to.

The excellent presentation by Dr. Maghy showed that iridectomy offered one of the best methods of treatment in the acute cases, but many men believed that for the chronic forms something was lacking in iridectomy, and we must resort to some other form of operation.

Dr. Oscar Dodd was much interested in the patients who had loss of vision after reduction of the tension. In two cases which he had trephined with success the tension came down to normal, but the vision decreased and the condition

was apparently growing worse. Careful examination showed that in each case there was focal infection from the teeth, and when this infection was cleared up the vision returned to practically normal. He felt that it should be kept in mind that in glaucoma cases there were other things to be considered besides the eye symptoms.

Dr. Oliver Tydings agreed with Dr. Dodds. Dr. Maghy had pointed to the symptoms of compression, which should not be present in glaucoma, and when the disc was blurred which certainly pointed to some inflammatory action. The symptom of vomiting pointed to toxemia of some kind. In one case there was detachment of the retina, in another retinal hemorrhage, the fundus was obscured in certain cases, and while these things might and did exist in connection with glaucoma they were undoubtedly due to other factors than glaucoma *per se*.

He cited several cases which had been treated by eserine and pilocarpin and had afterward cleared up to practically normal under the careful use of atropin. In one case he had followed this treatment with scopolamin and atropin and the vision was now 10/200 against fingers at 2 feet. He believed that in every case of glaucoma there was toxemia due to focal infection as a causative factor.

Dr. Francis Lane said that it would seem that the anatomic explanation for the permanent contraction of the field was a degeneration of the more anterior ganglionic cells of the retina. The peripheral cells appeared to possess less power of resistance to pressure and consequently were the first to degenerate. He had observed vacuoles in these cells at this location, which did not differ in appearance from those described following optic neuritis. All fibers of the optic nerve had ganglionic cell attachments in both the retina and the brain, so if in glaucoma the primary lesion lay in the ganglionic cells of the retina the changes in the nerve must be regarded as ascending atrophy. Optic nerve fibers did not follow the Wallerian law, because they had two centers.

The enlargement of the blind spot in glaucoma must also be explained on anatomic grounds. The lamina vitrea was the only structure of the retina and choroid which touched the optic nerve fibers. If glaucomatous excavation was present it could well be understood how the glass membrane could be subjected to traction or wrinkling at its border, thereby causing an anatomic disturbance of relationship of the rods and cones in the immediate vicinity which would account for the increase in size of the blind spot.

Dr. Harry Gradle said that the cases of non-inflammatory glaucoma were unquestionably manifested by increased intraocular tension. This was due either to increased secretion from the ciliary body or to retarded outflow of the aqueous from the anterior chamber. It was impossible to measure the first factor, but the rate of outflow from the anterior chamber could be estimated by massage. Following two minutes of deep massage, the normal eye was reduced in tension about 8.9 mm. of Hg.; if the reduction in tension was less than 4 mm., it might be said that the outlets of normal circulation were so blocked that a restoration to normal conditions could not be produced by miotics alone and that operative interference would have to be resorted to.

The reduction in vision under increased intraocular tension was due to many factors, two of which were pressure upon the nerve fibers as they crossed the unyielding scleral ring and pressure upon the ganglion cells in the periphery. When the nerve fibers were subjected to more or less uniform pressure, the first to yield were the most delicate ones and there was a reduction in central vision; but the more hardy fibers were also affected. If the pressure upon the scleral edge alone was the cause of the reduction, there would naturally be a greater reduction of central vision than of the visual field; but the reverse was true, showing that other factors were of greater import.

Dr. Michael Goldenburg was impressed with the cases reported by Dr. Brown and was sure many had had the same experience. In many of these cases vision kept going downward in spite of any method of treatment. He thought that the probabilities were that the same conditions which produced arteriosclerosis had some relation to the production of glau-

coma. By which he meant, some very insidious process that was going on in the body over a very long period.

The fact that every glaucomatous eye that came under the microscope disclosed an infiltration into the spaces of Fontana, root of iris, and most frequently an adhesion of that part to the cornea, thus cutting off the drainage angle, was very significant.

A statement recently made by Professor McCulloch led one to infer that in the future one would probably find glaucoma to be a local manifestation of a disturbed nutrition.

Relative to focal infection he was inclined more to the belief that this produced a serious iridocyclitis with a so-called secondary glaucoma.

Dr. Maghy, in closing, said he had seen 500 cases of eyes trephined and had only seen two infections. The Elliott technic was not always used by the Moorfields Hospital surgeons. The disc in every case was taken out and usually an iridectomy was done. He had seen many cases in which the conjunctival flap was torn but they did not come to infection. There was just a root iridectomy.

He had not taken up the etiology in his paper but just the end results in comparison with Stock and Meller.

Dr. Brown, in closing, agreed with Dr. Wilder that more fields should be taken; also he would urge that disc and tension changes be followed more carefully. He agreed, too, that when congestive attacks occurred the miotic treatment should be given up and operation performed. Yet he was not satisfied with any of the operations, and advised miotics as long as central vision, fields, and tension could be maintained in statu quo. He did not agree with Dr. Maghy that late infections after trephining were due to faulty technic, although he was at a loss to understand why there should be so few cases of late infection in England.

Dr. ROBERT VON DER HEYDT presented a patient who showed wrinkles in the form of vertical folds in the macular area.

The patient was a boy aged 11 years who had had cellulitis several weeks previously, following which the wrinkles appeared in the left eye. The right eye was negative, so he was no doubt dealing with an immediate after-result of the cellulitis. There was evidently a clouding of the retina.

Such cases were rare in the literature. Vogt reported vertical reflex lines and one case of vertical folds following cellulitis in an 18 year old boy. Other observers had reported folds but not presenting vertical direction. Examination with the red-free light showed these to be real folds. He thought the fact that the folds were not more often seen was because they probably were transient in character and only occurred in young individuals. There was no lowering of visual acuity in this eye.

Dr. WILDER asked if he had seen any cases in which he could demonstrate anything like metamorphosis.

Dr. VON DER HEYDT replied that he had not, the boy was probably too young to complain of this symptom or the metamorphosis might not have been very pronounced.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Monday evening, February 2, 1920, at eight o'clock.

The President, Dr. Alfred Lewy, in the Chair.

DR. EDWIN MCGINNIS read a paper entitled "The Intranasal Drainage of the Frontal Sinus and Anterior Ethmoid Cells."

ABSTRACT

The author stated that correct surgery should be founded on physiology and anatomy. On this basis it seemed to him some of the well known nasal procedures are wrong; for example, cauterization of septum or turbinates, while the submucous correction of the septum is right. Likewise, in the treatment of acute fronto-ethmoidal infections, two factors should be considered—the physiological functions of the nose, and of the epithelial cilia of the mucous lining. Our efforts should be to aid nature in the restoration of the activity of the parts. In operative work it is wise to remove as little as possible of the necessary tissue. Many of the author's ideas and much of his enthusiasm for this work came through the opportunity of studying with Dr. Harris P. Mosher of Boston. Long association in the practice of the late Dr. E. Fletcher Ingals of Chicago had given him an opportunity to study end results in all of the treatment and operative procedures in the nose. This study led him to the purpose of aiding nature, not handicapping her. His examination of many lateral nasal walls in cut sections of heads had been very illuminating to him.

In his plan of operation he opens the way as near to the ostium as possible, but makes no special effort to break into the sinus, thus leaving the normal relations of the frontal sinus intact. In cases where the septum is so deflected or thick as to obstruct the ethmoid region, a preliminary submucous resection of the septum aids very much in the work. He does what he calls a high submucous operation, bringing the ethmoid in view on both sides. It was this operation that opened his eyes to the ease of opening the ethmoid capsule.

Dr. McGinnis described the operation in detail and stated that the after-treatment consists of very simple irrigation of the nose once or twice a day, and an oily spray three or four times daily, containing thymol, grs. $\frac{1}{8}$, cocain alkaloids grs. iii, menthol grs. iii, and olei vaselin oz. i. He does not irrigate the sinus after the day of operation.

Four cases were cited briefly and the author stated that he had operated about sixty cases without any untoward results. In his opinion the ideal treatment is the one that gets the patient well in the shortest possible time, with a nose that functions better than it did before treatment was begun. The aim should be to treat the patient, as well as the condition, and to give him a better nose instead of a handicapped one, as has been the unfortunate result of some of the work in the past.

DISCUSSION

Dr. George E. Shambaugh complimented Dr. McGinnis on his discussion of an interesting subject. Dr. Shambaugh has for many years advocated the intranasal route as the operation of choice for both acute and chronic cases of frontal sinus disease requiring operation. An operation of any sort is rarely

necessary in the treatment of acute cases. In cases where it is apparent that the patient has had recurring acute attacks, it is best to secure better ventilation of the sinus by an operation between such attacks. In chronic cases the exenteration of at least the anterior ethmoid cells is always required.

In cases where the concha media stands out from the lateral wall sufficiently to permit, it has been his practice to operate on the ethmoid and the frontal sinus without disturbing the turbinated body. This prevents the possibility of injuring the cribiform plate. After the work on the ethmoid and the frontal sinus has been completed, one can then decide whether to resect the turbinated body.

The method of entering the frontal sinus by working from behind forward and upward through the anterior ethmoid cells is, he believed, very much safer than the more direct route going more nearly perpendicularly upward in front of the concha media, as advocated by Dr. McGinnis. The danger of forcing a passage into the brain fossa is greater when making the opening straight upward. In the chronic cases he has employed a rasp in securing a larger opening into the sinus. The operation is done under a local anesthesia and in a hospital. No packing is employed unless the bleeding should make one necessary.

Dr. Elmer L. Kenyon thought the work presented was important. If it was practical to operate upon the frontal sinus and ethmoid cells for infection and leave them essentially unmutated, it was of great importance. If through these measures one could finally do away with acute infection in this region, there was no necessity of thinking of operating upon a chronic condition. He thought no one could take exception to this simple procedure in acute cases. Whether Dr. McGinnis was too optimistic in regard to chronic infections he did not know, but he was inclined to think he was. This operation called for the development of a smaller type of instrument than those obtainable at present, and he hoped these would be developed by Dr. McGinnis and others working along this line. The occlusion of the frontal sinus is not due entirely to the fronto-nasal duct, but also to occlusion in the infundibulum below the duct. In his opinion, exhaustion is exceedingly important in the care of the nasal accessory sinus infections.

Dr. Charles Long was averse to operating on these conditions in the acute stages. In case of great pain it can be controlled by medicine, or some simple operation can be advised, such as irrigating an antrum, or the infraction of a middle turbinate bone to improve the drainage. The traumatism of operations upon the nose, as in acute inflammatory processes elsewhere, is a dangerous proposition. Watchful waiting, in a large percentage of cases, means recovery without any operation. If other measures failed, Dr. McGinnis' technic was very appropriate and could be successfully applied.

Dr. George E. Shambaugh has for many years advocated the intranasal route as the operation of choice for both acute and chronic cases of frontal sinus disease. An external operation of any type is to be resorted to only where there is a failure to establish satisfactory drainage through the intranasal route. Operations are rarely called for in acute cases except where spontaneous drainage cannot be established and for the relief of severe pain an operation is necessary. It usually suffices here to resect the anterior end of the middle turbinate. Rarely is it necessary to extend the operation further. In chronic cases exenteration of the ethmoid is always a part of a frontal sinus operation. Dr. Shambaugh believes that it is much safer to enter the frontal sinus by beginning in the ethmoid and working forward and upward, rather than by the direct route.

Dr. Norval H. Pierce said that there was danger in operating on acute cases. He knew of seven cases among his colleagues where death had ensued from operation on the middle turbinate body in acute infections of the anterior ethmoid cells. He felt that only in those acute cases of intractable pain lasting more than four days, where the drainage was obviously insufficient, should the danger be assumed of opening up the region, and then the operation should be thorough. In the subacute cases this danger seemed less. The danger

was decreased markedly if the operation took place a week or more after the onset.

Dr. Edwin McGinnis stated that the idea in leaving the middle turbinate was because it formed a bulwark between the anterior ethmoid cells, the antrum and the posterior group, to keep the infection forward, and also preserved the normal contour of the nose. In operating the biting is all done by sight. He had had a good deal of experience in treating acute frontal sinusitis with Dr. Ingals with the operation he devised, and he knew of no better way of avoiding chronicity than to make these patients well within twenty-four hours.

DR. NORVAL H. PIERCE discussed the subject of "Laryngofissure for Carcinoma, with Demonstration of Specimen."

ABSTRACT

Dr. Pierce's remarks related to laryngofissure in connection with carcinoma only. He believes that this operation should occupy a more prominent position among laryngologists in the surgery of the larynx than it does. The assumption of its proper position has been delayed by the advent of direct laryngoscopy.

Except in a few exceptional cases should specimens for microscopic examination of suspected cases of carcinoma of the larynx be obtained by indirect laryngoscopy. Even in the very best operative hands there is a certain inexactness in indirect laryngeal operating. The laryngeal mirror does not provide sufficient visual acuity for one to always distinguish the best place from which to excise a specimen for microscopic examination, and may lead to the removal of a part that is not carcinomatous, since other conditions may coincidentally exist in the larynx with carcinoma. Likewise, it is impossible to get a large piece from the depth of the growth by indirect laryngoscopy, and this is a *sine qua non* for reliable microscopic diagnosis in cancer. The only method that competes with laryngofissure for securing diagnostic specimens is direct, or suspension laryngoscopy. But suspension or direct laryngoscopy should be employed only to make a diagnosis of the suspected tumor, or to confirm a diagnosis by microscopic examination. It should not be employed for removal of the mass except in the rarest cases, where the growth is very small and superficial. Suspension laryngoscopy for the purpose of confirming the mirror diagnosis of a malignant tumor is often an unnecessary ordeal. It is preferable to proceed at once, in many cases, with the laryngofissure and if necessary at the time of operation, have the diagnosis confirmed by the freezing microtome.

The main considerations in treatment of suspected carcinoma of the larynx are early diagnosis and removal. In 1021 operations reported for the removal of carcinoma of the larynx by indirect laryngoscopy, laryngofissure, and partial and complete resection of the larynx, in recent years, laryngofissure gives by far the greatest number of recoveries which have remained cured for a year or more. The method is much ahead of total extirpation and of partial resection. His own statistics do not vary from those given above.

Practically all of the author's deaths have occurred

in patients who have had a tracheotomy performed at the time of operation. Now that the whole procedure can be performed under local anesthesia the whole aspect of the operation has changed. In cases where the tumor is small a preliminary tracheotomy should be performed. All the cases he had operated on without a tube, where the larynx had been closed immediately, had recovered because they were small tumors, the hemorrhage was very slight, the swelling very slight. In none of these cases that recovered did he use the cautery or radium. He believed a tracheotomy tube should be used in cases where the denuded area was going to be large, in cases where any of the interarytenoid region is to be removed, and in cases where radium, X-rays or the actual cautery is used. Recently he has been using the actual cautery in these cases. When the tracheotomy tube is used it should be placed in at least eight days before the thyroid is opened. It was a question as to whether this should be done under local anesthesia or gas. He believed the best way to proceed in these cases is to first make the tracheotomy, making the incision from the hyoid to the jugulum, inserting the tube, stitching the upper and lower portions of the wound. Then about eight days afterward the wound can be very easily ripped open by a dressing forceps under infiltration anesthesia and the rest of the operation performed.

The author described the operation in detail and discussed the matter of tamponing. He believed that in the operation under consideration packing should be avoided, and that the larynx should be closed immediately afterward, even where the actual cautery is used. If radium is used the larynx must be left open, but his experience leads him to the conclusion that the dangers incurred in leaving the larynx open greatly overbalance the benefits derived from radium. The best way to prevent infection is to close the larynx immediately.

The specimen shown was from Dr. Pierce's last case of laryngofissure. The patient was a man in the late fifties who, in July, was treated for laryngitis because of hoarseness. The diagnosis was not made. The hoarseness disappeared, but in October, 1919, it recurred without any apparent cause. At that time a diagnosis by the indirect method was easily made of carcinoma of the left vocal cord. The growth measured about one inch or less in length and about one-half inch in width, and produced a tumor that limited the motion of the cord; it was hard, immovable and surrounded by a zone of hyperemia. The man should have recovered. Laryngofissure was performed, the growth excised, the base cauterized by the actual cautery and the patient was in the usual condition of these cases for about two days, when he had a chill and died of pneumonia. The demise he thought, could be attributed to improper after-treatment.

Post-mortem revealed a completely collapsed right lung, which they had thus far been unable to account for. There was no connection between the

tracheal wound and the pleural cavity. Saline solution had been injected under the mammae, but no perforation in the chest wall could be found. Such a case was deplorable; the wound looked quite healthy. Below the tracheal opening was an area of necrosis caused by pressure of the tracheal tube.

DISCUSSION

Dr. Joseph Beck considered the presentation of Dr. Pierce excellent, and cited a case of carcinoma of the larynx which he had operated a week or ten days before. As the request of the patient's physician, radium was used preoperatively, 150 mg. for twelve hours over the greater portion of the larynx. The following day the patient was operated on under local anesthesia. A median incision was made and a tube placed in, because they intended to follow the operation by subsequent radium treatment. The growth was excised and the cavity packed with a strip of gauze. The patient received one-fourth grain of morphine about half an hour before the operation. During the night he had considerable difficulty with secretion; the gauze was causing irritation and the interne removed the packing, which relieved him. There was considerable secretion in the tracheal tube and in the bronchi, which the interne removed by inserting a sterile catheter under sterile conditions. The following day the patient had a fairly good pulse, but Dr. Beck felt that the man was getting more air than he could consume and appeared to be somewhat in shock. An internist was called in but the patient succumbed on the following day.

The speaker did not agree with Dr. Pierce in not resorting to preliminary microscopic examination, but thought a definite histological examination was of some benefit.

Of the various operations for the cure of carcinoma he thought the best results were obtained from a laryngofissure, using no tube and sewing up the larynx. As to the question of radium and X-rays, Dr. Beck thought the preoperative radiation which was so thoroughly believed in by the men in the east was a question in reference to which Fenger called attention many years ago, of the production of the higher toxic substances or toxin. These substances develop from decomposition, and he wondered whether the case he cited had not succumbed to some such thing producing the cardiac complication.

Dr. J. Holinger gave a short history of a patient in whom he removed a carcinoma from the anterior commissure and both Morgagni's ventricles under local anesthesia by means of a laryngofissure. The patient was practically well and able to go home after five days. Subsequently a scar in the form of a diaphragm through half the lumen of the larynx formed. This was partly removed. The patient gained fourteen pounds, but he suffers from slight shortness of breath.

Dr. Otto J. Stein recalled two cases which he had presented before the Society six or seven years ago, both of whom had been operated under local anesthesia and both of whom were still doing well. Dr. Stein believed in the removal of tissue for confirmation of the diagnosis, and had always done this by the indirect method until recently, when he had been using the suspension laryngoscopy, which he considered far superior to the indirect method. In his opinion laryngofissure is the proper method for the removal of fairly well localized tumors of this character within the larynx, provided they were not complicated by any glandular involvement. He never used packing, and thought local anesthesia had many advantages over the general.

Dr. Harry L. Pollock was sure small, localized carcinoma of one cord could be removed very nicely by laryngofissure without preliminary tracheotomy, and very little packing was necessary in these cases. They got along better if they were sewed up. Dr. Pollock cited the case which was diagnosed as carcinoma in a man of sixty. A portion of the growth was removed by direct laryngoscopy but examination revealed nothing but connective-tissue and round-cell infiltration. Laryngofissure was then performed, the entire growth removed, but the tissue was of the same non-malignant character. When they reached the thyroid cartilage they found a tumor about the size of a hazelnut projecting. When the membrane was

incised pus began to flow so the growth was dissected out and a drain put in. The patient had a cellulitis but made a good recovery and his voice and larynx became absolutely normal. He thought the condition was a perichondritis followed by an abscess. He agreed that in the small, localized carcinomata it was well not to do a preliminary tracheotomy, not to use packing and to sew up immediately. He had not seen any pronounced benefit from radium therapy, and even when the cautery was used it was possible to sew up the wound, as there is so little edema following the operation.

Dr. Pierce (closing), said that the cases of carcinoma of the commissure were of special importance but, as was well known, they were likely to result in webs and scars. However, this danger should not preclude the performance of the laryngofissure, because the web or scar was very much more readily dealt with and the patient was in much better condition than if total extirpation was performed.

He realized that his view regarding the preliminary microscopic examination for confirmation of the mirror diagnosis was rather iconoclastic. However, Dr. Pollock substantiated his view. In the case he cited, where he was not sure of the diagnosis, where the diagnosis was against carcinoma, yet he did the laryngofissure. The point was that one could not depend upon indirect laryngoscopy for removal of fissure for microscopic examination. He thought practically all laryngologists believed this. In his opinion, there was no doubt that direct laryngoscopy was one of the best methods of doing this. But with a tumor in the larynx, with syphilis excluded, with tuberculosis excluded, the probabilities are that the growth is carcinoma, so why not make the diagnosis at the time of operation, without subjecting the patient to all the other more or less demoralizing and depressing experiences. He reserved the right to modify his views at any time.

CHICAGO OPHTHALMOLOGICAL SOCIETY

A regular meeting was held February 16, 1920, with the President, Dr. Alfred N. Murray, in the Chair.

Dr. Sydney Walker read a paper entitled "Ocular Manifestations in Encephalitis Lethargica."

He said that the ocular manifestations in encephalitis lethargica were numerous, varied as to type, as to degree of intensity, were not a constant factor, and might or might not be associated with other cranial nerve involvements. Bassoe defined this as a toxic infectious epidemic syndrome characterized clinically by the triad lethargy, ocular palsies, and a febrile state, and anatomically by a more or less diffuse encephalitis most marked in the gray matter of the mid-brain.

The etiologic factor or factors causing this disease were not definite, the blood picture was not characteristic, the spinal fluid gave the same picture as in poliomyelitis; in fact, from a laboratory standpoint it was difficult to differentiate from tubercular meningitis. Wilson in the London Lancet stated that the virus of influenza, without causing any recognizable acute symptoms, might after weeks or months produce the changes in the brain observed in encephalitis. Or, as J. B. Neal had said, the virus of influenza might make the individual more susceptible to the causative agent of encephalitis or enhance its virulence.

Pathologically there was edema, congestion and minute hemorrhage most numerous in the brain stem, basal ganglia, centrum ovale, the grey matter of the floor of the fourth ventricle, and the aqueduct of Sylvius, and a dense accumulation of mononuclear cells around the vessels. There was little or no necrosis or extensive tissue destruction as in poliomye-

litis, this distinction being in accord with the clinical fact that paralysis was a much more conspicuous symptom in poliomyelitis than in encephalitis. The histologic picture of this condition described by English authors was the same for trypanosomiasis.

The symptoms were not constant, and several types of this condition had been described by different authors, and he might add that they did not agree as regards their frequency or relative importance in the diagnosis of the disease. Bassoe stated that the first suggestive symptom was blurring of vision with a more or less definite diplopia, together with lethargy. In the two cases that he had had these were the most definite symptoms. This early tendency to ocular-motor disturbance indicated primary involvement of the upper part of the brain stem around the aqueduct of Sylvius and the third ventricle. The early occurrence of lethargy pointed to it being a focal symptom rather than an expression of intoxication of the higher brain centers. McNalty attributed this stupor to the localization in the vicinity of the third nerve, since a lesion in this locality cut off afferent stimuli; and, as Bassoe pointed out, the fact that with brain tumors in this region there was lethargy, was suggestion of a sleep center in this neighborhood.

By far the greater majority of men reported involvement of the ocular nuclei, but there had been a few report fundus findings.

In one of the two cases he had had the ocular symptoms had been very prominent. This case seen by Dr. Hamill ran a more or less typical course, developing a divergent palsy, and a loss of his accommodation early in his illness. He had refracted him just before his illness and with a small correction obtained 20/20 vision. At that time there was no fundus findings, and just recently he examined him again with a like result. His divergent palsy had remained stationary, but there had been a partial return of his accommodation.

The second case was somewhat less definite in character. The patient, 23 years of age, had been suffering with what his physician had termed a nervous breakdown, and while in this condition had been semi-comatose for a period of ten days. He came to his office some days after complaining of an inability to read, and upon examination he found a total loss of accommodation and his convergence insufficiency. Otherwise his eyes were negative, and were the only ocular symptoms present at any time during his illness.

CONCLUSIONS

1. The ocular manifestations in encephalitis were numerous, and were not a constant factor.
2. The virus appeared to have a predilection for certain cranial nerve nuclei.
3. The third nerve was most often involved, alone or in association with other cranial nerves.
4. Lesions of the optic nerve were not one of the manifestations of this condition, but might be one of the complications.

DISCUSSION

Dr. George W. Hall said that the ocular manifestations were not infrequently the prodromal symptoms, and for that reason

the oculist was likely to overlook the particular condition that he was dealing with at that time. The temperature might not be high. The patient might complain of slight drowsiness; he might have a paralysis, or a transitory paresis, perhaps of the internal or external rectus, and the diagnosis at that time might not be easy to make. In a few days that condition might abate to some extent; it might disappear. On top of that we found possibly facial paralysis supervening, and then lumbar puncture would aid us in clearing up the diagnosis.

Of the ocular manifestations, drooping of the eyelids was perhaps the most common; next was paresis of the external rectus, and to a less extent other ocular manifestations. But the partial third nerve paralysis in the large percentage of cases was most frequently present.

Dr. Walker brought out the point that in some instances the diagnosis was made without ocular manifestations. He thought the literature showed that, but he questioned very much the diagnosis in some of these cases. Personally, he had never been able to verify that statement clinically by succeeding examinations, and examination of the spinal fluid, or perhaps by autopsy. At one time or another eight slight or decided ocular manifestations were present. Either one nerve or perhaps the third, fourth and sixth nerves were combined in the same individual.

He reported a case at the County Hospital which entered his service on March 31, 1919. At that time both lids were drooping; the palpebral fissures were very much narrower; the pupils responded to light very sluggishly, they were slightly irregular; the right pupil was larger than the left. The conjunctiva was injected; nystagmus was present, and on April 5 the right eye deviated to the right and there was more decided ptosis on that side. On the 7th day patient complained of complete blindness in both eyes which seemed to have developed rather suddenly. He had at that time complete external and internal ophthalmoplegia. He also developed facial paresis on both sides. There was deafness in the left ear to the watch tick. On the 8th, the next day, the right and left eyes reacted sluggishly to light. The nerve head was normal. On the 9th day the patient's eye grounds were checked up by Dr. Cushman, and she found the disc and blood vessels normal at the time. On the 9th day patient could count figures in front of the eyes. On the 10th there was very good movement of both eyes.

About the spinal fluid, there might be differences between the findings in the spinal fluid of polioencephalitis or poliomyelitis and encephalitis lethargica. The spinal fluid in some of the most severe cases of lethargic encephalitis was perfectly normal. In these cases which showed extreme delirium, which gave an exact picture of delirium tremens plus eye paresis, the spinal fluid was absolutely normal. He had seen some six or eight cases of that type. A cell count was made on two or three different occasions, and never more than six or eight cells per cu. mm. were found in the spinal fluid. In those cases, however, which showed marked involvement of the basal ganglia, that is, complete bilateral facial paralysis, with more complete ocular findings, there was a cell count of 250 or 300. In some instances tubercular meningitis was considered in differential diagnosis.

Dr. L. J. Hughes, of Elgin, Illinois, reported a case he had under observation at the present time of a man 35 years of age. Three weeks ago he was taken with pain in his stomach and a local physician diagnosed his case as one of stomach trouble and put him on appropriate treatment. He became gradually worse and went on developing a lethargic state until he was practically comatose. He developed lateral nystagmus and complete blindness. He saw him the latter part of last week for the first time. The nystagmus was very marked. He had bilateral facial paralysis, which was not complete but quite marked. He had some difficulty of speech. He had slight ptosis of the lids at the time. There was no divergence, however, of the eye, but the fundus findings were plainly marked. There was rather marked edema of the retina in each eye, with some slight tortuosity of the vessels. What appeared to be the tail end of a choked disc was clearing up. He had been totally blind, so that he could not see for a week, and this condition was beginning to clear up at the time he saw him. His nystagmus was becoming less, his vision was returning. He was

seen by Dr. Pollock, who made a diagnosis of lethargic encephalitis. The findings were practically those given by the essayist. The treatment in this case was 30 grains of aspirin and 30 grains of bicarbonate of soda every 4 hours.

Dr. Frank Brawley reported what he considered a milder case than any which had been reported. It was in a case of influenza which was followed by pneumonia. There was complete third nerve paresis, with the usual lack of any accommodative power. At the time he saw the patient there was no diplopia, but the pupils were completely dilated and fixed. There was nothing to be seen in the fundus, and although he suggested the possibility of encephalitis to the attending physician, he said he was not able to find any symptoms outside of the eye condition. At the time he saw the case there was beginning to be improvement, the diplopia had disappeared, and there was beginning return of accommodative power. The pupils still remained dilated and fixed.

Dr. Thomas O. Edgar, of Dixon, Illinois, reported a case of encephalitis lethargica which he was called to see on December 20, 1919, three days before the patient's death. E. C. F., a girl, aged 15, two weeks previously had had a discharge from the nose, following which she became sick; at times complained of a headache, especially in the right frontal region. About December 10, according to her physician's report, the patient exhibited jerky or almost chorea-like motions, but a few doses of bromids quieted her, since which time she was always drowsy, but always intelligently and promptly answered questions. For the three or four days preceding December 20, the patient was unable to cough up any of the mucus, which accumulated in her throat. Heart action and lungs had been normal. She had had a slight fever. Patient had complained of diplopia for a few days. Pupils had been unequal, the right one being larger than the left. When seen by him, the eyes were partially open, but turned up; patient was unable to rotate eyes downward; fundi normal; the pupils were unequal, the right one being the larger. They reacted to light, but motion limited. A culture made from the middle meati of the nose showed cocci arranged in pairs, a few chains and irregular groups. Suction failed to bring out any discharge from the sinuses. The following night, the patient's temperature rose to 105° and death occurred on December 23.

Wells P. Egleton, in the *Annals of Otolaryngology and Rhinology* for September, 1919, called attention to two points: First, the frequency of ambulatory patients; secondly, to the lack of reference in the literature to the involvement of the eighth nerve, particularly of the vestibular apparatus. Of 7 cases seen by him, 4 were ambulatory. All of these ambulatory cases exhibited a demonstrable disturbance of the vestibular reaction.

Dr. George F. Suker asked Dr. Hall whether or not any of these cases of encephalitis lethargica showed, after they had practically recovered, mental exaltation for the time being.

He had under observation at the present time a case in which there was paralysis of the sixth nerve with nystagmus. The man was loquacious and grandiloquent, but other than that the man had made a complete recovery. It was contrary to his nature to be loquacious, and he would like to know whether this mental condition was now and then found.

Dr. Robert Von Der Heydt mentioned a rather unusual case he saw during the existing epidemic at the Robert Burns Hospital, which terminated fatally. In addition to a lethargic state, the man had ptosis. He remembered distinctly he had to hold up the lids to see the fundus, and in the fundus he found hemorrhagic retinitis three days before death.

Dr. Alfred N. Murray personally had seen two cases of encephalitis lethargica recently; one of the acute form with ophthalmoplegia interna and paresis of the ocular muscles. In this case he could obtain spontaneous nystagmus, both vertical and lateral. The man had paralysis of accommodation amounting to 2 D. He was so sleepy that one might think he was under the influence of an opiate. He had not seen the patient recently, so that he did not know what his present condition was.

The other one, after having recovered from the acute condition, showed an exudate about the discs indicative of a preceding papillitis; and he had paralysis of accommodation in one eye amounting to 2 D. He saw him five months after his

first visit and paralysis of accommodation of 2 D. was still present. He was recovering, but was still rather sleepy in his demeanor.

Dr. Hall said that Dr. Suker had called attention to an interesting point. Certain mental conditions might occur after apparent recovery in these cases. As the process was a toxic one, with the relief of the condition the brain cells might become more active, but so far as any particular exhalation was concerned, he had not noticed it.

Dr. William H. Wilder asked Dr. Hall if he knew what changes in the brain were observable in the autopsy findings to account for those symptoms that were so familiar to those who had seen these cases. It would be interesting to know if he had found any changes in the brain to account for the various nerve palsies, and whether they were basilar or nuclear, and whether the changes found in the brain would account for the nystagmus.

Dr. Hall said that his own explanation was, although it might not be correct, that these conditions, as a rule, were transient so far as ocular manifestations are concerned. Often the most severe grades cleared up. If that be true, then the nucleus itself could not be destroyed. There must be and was present a certain amount of edema thrown around the vascular disturbance which might account for the changes present, but if we had complete destruction of the nucleus the paralysis would be much more permanent than it was at the present time.

Dr. Walker, in closing, stated that the literature was somewhat scant in regard to the prognosis and treatment, so that we did not know what to expect in the future. As Dr. Hall had said, unless there was destruction of the nerve nuclei the condition would clear up.

A PRELIMINARY ANATOMICAL STUDY OF SIX CASES OF DEGENERATION OF THE CORNEA

Dr. Charles Maghy read a paper on this subject in which he reviewed the literature. He stated that degeneration of the cornea was first described by Beselin as amyloid, in an eye that was staphylomatous. He found in the superficial layers of the scar of the cornea peculiar, highly refractive, organic masses of various shapes, not unlike those pictures which Goldzieher, Saemisch, Wedl and Bock described as colloid of the cornea, which, however, with a 2 per cent. iodine solution gave the typical amyloid reaction. Beselin was of the opinion that the refractile masses were in no way related to the cells of the epithelial layer and when found in this situation had invaded the same from the stroma cornea below.

He quoted from the contributions of E. von Hippel, Saemisch, Goldzieher, Wedl and Bock, Schiele, Kamocki, Baquis, Vossius, Sachsaler, Birch-Hirschfeld, Wyssokowitsch, Bubert, Von Reck, Ernest, Von Kahlén, and Unna, and reported 6 cases.

In all his cases one saw connective tissue upon and calcification of Bowman's membrane at the same time, so he could not decide which was the primary. As to the causes of the calcareous degeneration, he enumerated:

1. Nutritive disturbances or diminished interchanges of material and senile alteration of the blood vessels (primary band opacity).
2. Evaporation and external irritation in the region of the lid fissure. From the occurrence at the same time of calcification in the posterior parts of the eye it was evident that the cause of the calcareous degeneration of the cornea

was not only local in origin, as other authors said. The lime came from the nutritive fluid.

The homogeneous mass in his sixth case resembled very closely in shape and situation those found by Beselin, Saemisch, Goldzicher and Birch-Hirschfeld. Beselin regarded it as amyloid, because he obtained the iodine reaction, although not markedly as was usual in the case of tyro amyloid. Saemisch and Goldzieher regarded it as colloid. They did not describe the color reactions. Birch-Hirschfeld obtained no iodine reaction, and regarded it as hyaline transformed from the blood proteids. Under the term colloid this author included glue-like masses produced by metamorphosis of the cell elements themselves. On the other hand, hyaline and amyloid generally were considered as formed outside the cells, although lately it had been suggested by a few authors that amyloid arose from plasma cells. Baquis considered the color reaction for amyloid incomplete and regarded the mass in his case as colloid, notwithstanding the fact that it showed this color reaction. These varieties of degeneration came from the following circumstances:

1. The iodine reaction for amyloid was not present in the majority of the cases.

2. Differentiation of hyaline and colloid material was impossible both physically and chemically.

According to his ideas he should regard as amyloid those masses which showed more or less iodine reaction; it was conceivable that one body became transformed into another, and that thereby various phases appeared which stained incompletely by the given staining reaction. On the other hand, he should distinguish colloid and hyaline genetically. Most pathologists did this, although their methods of differentiation varied. As Birch-Hirschfeld and other authors said, he accepted the possibility of the transformation of hyaline to amyloid and he regarded that in Beselin's case the hyaline was already changed into amyloid. In his cases (the author's) the masses in the epithelium were always intercellular, not intracellular, contrary to the opinion of Baquis, and he did not regard it as a secretion from the epithelial cells. Also, as far as the substantia propria and corneal lamellae were concerned, it was not in them, but between the fibers. This was also contrary to Beselin's view.

DISCUSSION

Dr. E. V. L. Brown said that he was struck by the disposition of the hyaline in or along the course of the new formed vessels in the limbus placed both deep and superficially, yet he would hesitate to draw any deduction as to the origin of the hyaline from this alone.

Dr. Maghy was unable to come to a conclusion as to whether or not the pannus tissue was first formed in front of or behind Bowman's membrane. Serial sections would undoubtedly have helped in this matter.

With conditions returning to a prewar status many members would again interest themselves in the pathological study of their cases, and in this connection he would urge that carefully detailed and accurate clinical histories be taken and precede any laboratory work. Any attempt to study an enucleated eye was time wasted if good clinical notes were lacking.

Dr. Robert Von Der Heydt mentioned some of the newer methods for investigating the structures of the anterior eyeball recently perfected by Gullstrand and used by himself,

Koepe, Ergellet, Vogt and others. These investigators used a binocular corneal microscope and the slit illumination of Gullstrand. Vogt used the Nerst lamp and also a micro-arc-lamp and described the circulation of the blood in the vessels at the limbus. The current often stopped and changed direction in its course through the vessel loops. He could see the living endothelium on the cornea, each individual, olive-yellow hexagonal cell.

Regarding the vacuoles, Vogt described pit-like round depressions and globules in the epithelium in corneal scars and senility, wherever the corneal nourishment might be poor. He describes a physiologic dew-like change of the epithelium at the limbus, probably an increased saturation with nutrient fluids; also a dew-like pathologic carpet of droplets in and on the endothelium in keratitis and iridocyclitis.

Many of the changes observed in this manner in the living eye would escape detection by the ordinary method of examining stained sections. In this process, the fixation and cutting of the sections would, in all probability, destroy many of these delicate structures.

Dr. Maghy, in closing, stated that in cases of band opacity of the cornea in which blood pigment was found, the question of whether this pigment was primary or secondary was of vast importance. If the pigment was deposited secondarily following glaucoma, why was it we did not see it more often in cases of secondary glaucoma? If it was a primary process, we ought to see it more frequently in cases where we had had hypopyon ulcer, with extensive scar formation and tension. We ought to see it in penetrating injuries in which the iris had been drawn into the wound.

PROBABLE MELANOTIC SARCOMA AT THE SCLERO-CORNEAL JUNCTION

Dr. William H. Wilder presented a patient, a woman 38 years of age, with a tumor, probably malignant, in the sclero-corneal region of the left eye. The patient, otherwise healthy, had had a discolored, brownish area in the ciliary region of the temporal side of the left eye since childhood. This was supposed to be a birthmark. The appearance of it did not change until four years ago, when it seemed to enlarge and become thicker and to gradually extend toward the limbus. In the last year it had been more active and more vascular and was now seen as an irregularly shaped flat growth about 1 cm. in its longest diameter and possibly $1\frac{1}{2}$ mm. thick in the temporal ciliary region of the left eye. The growth was pigmented in places and had extended onto the corneal limbus for about $1\frac{1}{2}$ mm. in the form of a dirty grayish membrane.

It was impossible to say whether it had infiltrated the sclera. There was no pain, the vision of the eye was 20/30, and nothing abnormal could be seen with the ophthalmoscope or by transillumination. It had the appearance of a melanotic sarcoma, although one must remember that epitheliomas in this region might sometimes be pigmented.

After carefully presenting the dangers of the case to the patient it was decided to try the effect of radium before resorting to enucleation of an otherwise normal eye. So far nine treatments had been given.

Dr. George F. Suker presented the following cases:

1. CRANIO-TABES. Young man with optic atrophy, bilateral, in whom 20/20 vision, each eye, with uniform concentric contraction of fields to about 10° had been maintained since 1916 by the intraven-

tricular injection of bichlorid of mercury into the anterior horn of the right lateral ventricle. In all he received six injections varying from 1/100 grain to 1/25. The mercury was added to about one-half of the intraventricular fluid withdrawn and reinjected into the ventricle. Systemic and antisyphilitic treatment was also given.

2. ACROMEGALY. Young man with positive evidences of acromegaly, in whom there was a concentric contraction of each visual field with but a semblance of bitemporal hemianopsia. Each disc showed a minimum amount of swelling (papilloedema) on the nasal side. The sella turcica was rather large and showed evidences of a neighborhood involvement as well.

3. PERSISTENT HYALOID ARTERY AND A FUSIFORM ANEURYSM OF THE SUPERIOR TEMPORAL ARTERY IN SAME EYE. In this case, a young man, there were three distinct branches from the main trunk of the remains of a hyaloid artery. The three branches were free and motile while the trunk was fixed. The three branches were on the temporal side of the disc. The main trunk was about 5 mm. in length and their branches varied from 3 to 5 mm. in length. The superior temporal artery showed a fusiform dilatation of about 5 mm. in length; vision was normal, and no other anomalies present.

4. OPTIC NEURITIS (WOOD ALCOHOL). Young man, who with three others enjoyed a methyl alcohol debauch. The other three died. When the young man was brought to hospital, he had vision in each eye, limited to hand movements. Spinal fluid and blood Wassermann negative, and yet salvarsan given in intensive doses and at relatively short intervals, restored vision in each eye to 20/30. When able to take visual fields, no positive central color scotoma was obtainable, but only a central relative scotoma for color and form, for about 15° was obtained. The discs, six weeks after debauch, did not show any distinct evidence of atrophy, though there was a moderate temporal pallor present in each. Whether or not the salvarsan injections had any direct effect in producing this rather good end result was not fully determined. And, still, one could not altogether deny the influence of the arsenic in salvarsan upon the so-called retrolubar optic neuritis. Freec elimination with sweatings were the only other measures employed.

graphs taken before and after the injection of the paraffin and following operation.

The patient was a young lady who had a slight "saddle nose," for which a beauty specialist had injected paraffin to remedy the defect. The paraffin soon produced irritation and a large growth resulted, which included the corner of her eyes and part of the forehead. She consulted a surgeon in Minneapolis, who decided to remove the growth, and immediately after this the nose took on the appearance of acne rosacea. The paraffin was injected eleven years ago and operation was attempted two years later.

When seen by Dr. Pollock two years ago she presented an irregularly lobulated tumor mass which caused severe pain in the eyes. For this reason removal was decided upon, so part of the mass was extirpated and the wound kept open. Evidently the air had some effect in dissolving the paraffinoma that remained. After a few months they dissected out the whole thing so far as they could tell, but after a short time there was a recurrence that was almost like a malignant growth, which went down to the antrum and involved the tissues of the face. Following this they performed a radical antrum operation on both sides, making through-and-through drainage, and dissected up under the eyebrows on each side to remove the paraffinoma and permitted the wound to granulate in. Many different things were used to assist in healing, but until the institution of radiotherapy four weeks previously, there had not been much change. At the time of presentation the pain was all gone and the wound was healing over. After the wound was entirely healed they expected to do some plastic work, and would probably make a new portion of the nose from a piece of the tibia.

(To be continued)

COLES-CUMBERLAND COUNTIES

Coles-Cumberland Medical Society met at Mattoon, Ill., Sept. 23, 1920, at the Chamber of Commerce rooms.

Dr. H. A. Shaffer in the chair. Meeting called to order and Dr. Weaver of Lerna and Dr. Morgan of Humboldt were elected to membership. A banquet was then served to the fifty-five present.

After the banquet Dr. Grinstead, president of the Illinois Medical Society, gave an address on "Health Insurance and Medical Legislation." Following his address were talks from many of the visiting and our own members. Meeting adjourned.

R. H. CRAIG, Secretary.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Monday, March 1, 1920, at the Palmer House at eight P. M., with the President, Dr. Alfred Lewy, in the Chair.

PRESENTATION OF CASES

Dr. Harry L. Pollock presented a patient who had been operated for paraffinoma, and exhibited photo-

MADISON COUNTY

Our August Meeting

The Madison County Medical Society met in Lindendale Park in Highland, on August 6, 1920, Dr. E. F. Wahl, vice-president, presiding.

Twenty-four members and twenty-six visitors were present.

Dr. Harry Ernest Middleton, of Alton, was elected to membership.

On invitation of Dr. M. W. Harrison, Collinsville was selected as the place of our next meeting.

Miss Helen A. Heighway, Community Nurse, was present and read her report, which was ordered filed. On motion of Dr. R. S. Barnsback, Miss Heighway was granted a leave of absence for ten days.

Dr. Louis Rassieur, of St. Louis, read a paper on "Hospital Organization" and also gave some statistics on "Cirrhosis of the Liver."

Dr. John M. Dean, of St. Louis, presented "The Treatment of Empyema."

Dr. Andrew C. Henske, of St. Louis, read a paper on "Treatment of Tuberculosis."

All of these papers were highly interesting and called out quite an animated discussion. A vote of thanks was given to our speakers for their participation in the program.

Elegant refreshments were provided by the profession of Highland, for which a vote of thanks was tendered.

Our September Meeting

The Madison County Medical Society met in the Masonic Temple at Collinsville, on September 3, 1920, with President Dr. F. O. Johnson presiding.

Fifteen members and four visitors were present.

The minutes of the last meeting were read and approved. The application of Dr. R. H. Greaves of Collinsville was presented and referred to Board of Censors.

Miss Heighway read her monthly report which was ordered filed.

Dr. Curtis J. Lyter of St. Louis then delivered a very fine address on "Gall Stone Disease," which was highly appreciated and for which he was tendered a rising vote of thanks.

Adjourned to meet in Madison on October 1, 1920.

OGLE COUNTY.

The Ogle County Medical Society met at the Court House on July 21, 1920, at Oregon, with Dr. W. E. Kittler, president, in the chair. Minutes of last meeting were read by the secretary and approved. Seventeen members and several visitors were present. Among the visitors from outside the county were Drs. Murphy of Dixon, Weld and Wilgus of Rockford and Williamson of Chicago.

The following officers were duly elected for the coming year: President, Dr. W. E. Kittler, Rochelle; vice-president, Dr. J. C. Akins, Forreston; secretary-treasurer, Dr. J. T. Kretsinger, Leaf River; delegate to State Medical Society, Dr. J. M. Beveridge, Oregon; alternate, Dr. G. S. Henderson, Holcomb. Censors: Dr. J. C. Akins, three years, and Dr. L. M. Griffin, one year.

Dr. Matt Elsen of Stillman Valley was elected to membership in the society.

Motion by Dr. Henderson and passed unanimously,

that the minimum charges for mileage is 0.75 per mile for all insurance companies.

Dr. Charles Spencer Williamson of Chicago gave an able and comprehensive talk on "Treatment of the Commonest Heart Conditions."

Owing to bad train connections Hugh L. Morrison, from the Department of Public Health, was unable to be present. Dr. Sidney D. Wilgus of Rockford was prevailed upon to give a talk on "Mental Diseases." His subject was well presented and enjoyed by the society. Motion that a vote of thanks and appreciation be given Drs. Williamson and Wilgus was carried by a rising vote unanimously. Motion by Dr. John that the next regular meeting be held in the Star Theater, Oregon, and that Hugh T. Morrison be invited to be present, carried.

Adjourned.

Dr. J. T. KRETSINGER, Secretary.

PERRY COUNTY

Perry County Medical Society met in Duquoin, August 12. Dr. Fred Baily of St. Louis spoke to those present on diseases and injuries of the abdomen.

During the business meeting following a resolution was adopted directed against all advertising other than mere announcements of being in or out of one's office.

Perry county physicians are co-operating with the County Tubercular Nurse, but are opposed to free treatment by the state for those able to pay their bills.

J. S. T.

ST. CLAIR COUNTY

Our September Meeting

The St. Clair County Medical Society met in regular session in the Chamber of Commerce rooms, Murphy building, East St. Louis, Illinois, September 2, 1920, eight o'clock P. M.

Fifteen officers and members were present.

Dr. Zimmermann rendered a report on the activities of the committee of the Society on the conference with the War Civics Commission. He recommended that the Society select three members to serve on the Advisory Health Board.

Moved by Dr. Lillie, seconded by Dr. Tharp, that the committee now serving be the Society's selection for the Advisory Health Board. Carried.

Dr. L. Ryan was elected to membership.

Bills from the Belleville branch for the entertainment of the St. Clair County Medical Society at the Country Club presented and allowed.

Doctors Zimmermann and Tharp presented a number of pyelograms, with case reports, and one radiogram of a healing case of military tuberculosis.

Moved by Dr. Skaggs, seconded by Dr. Lillie, that the St. Clair County Medical Society go on record as condemning the indiscriminate writing of liquor prescriptions, and that the Society render all possible aid to the prohibition enforcement officers. Carried.

No further business appearing, the Society adjourned.

WALTER WILHELMJ, Secretary.

Personals

Dr. Kellog Speed has returned from France.

Dr. F. E. Gelder has removed to Los Angeles after ten years' practice in Peoria.

Dr. Peter C. Schenkelberger has returned after a six months' tour in Italy.

The estate of the late Dr. Joel J. Foulon of East St. Louis is said to amount to \$20,000.

Dr. J. F. Crowley of LaSalle is recovering from a severe illness.

Dr. Alice Barlow Brown, Winnetka, is reported to be ill in Serbia.

Dr. George H. Stacey has been appointed by the mayor of Peoria, director of the venereal disease clinic soon to be opened in that city.

Dr. J. V. White has removed from Auburn to Decatur and has limited his practice to diseases of the eye, ear, nose and throat.

Dr. A. H. Simmons, of Girard, is said to have suffered a cerebral hemorrhage while making a call, and is recovering.

Dr. T. B. Williamson has severed his connection with the automobile business in Mt. Vernon and resumed practice in Opdyke.

Dr. H. N. Heflin, Kewanee, is touring California and attended the meeting of the American Public Health Association last month.

Dr. E. G. Merwin, of Highland, who sustained a fracture of the leg in an automobile accident, has recovered sufficiently to take up office work.

Dr. E. R. May, Cornell, has removed to Le Roy and purchased the practice of Dr. J. A. Tuthill who retires after 40 years of active practice.

The Douglas County Medical Society gave a complimentary banquet, September 3, to Drs. William S. Martin and James L. Reat, both veteran physicians of Tuscola.

Dr. Harry Rand of the Iroquois Hospital staff, Chicago, was attacked, September 7, by a delirious typhoid patient, who attempted to shoot the physician. Fortunately, the cartridge failed to explode.

Dr. F. A. Renner of Benld is taking a post-graduate course at Washington University, St. Louis, and will locate in Lebanon, in general

practice with special attention to diseases of children.

Dr. M. H. Sawyer of Ottawa started with his family for an extensive trip by automobile through Wisconsin and Michigan. Near Portage the car "turned turtle." After dressing all injuries he purchased a new car and finished the tour.

Dr. O. W. McMichael desires to announce the removal of his office from Suite 810 Marshall Field Annex Building to Suite 1414 Reliance Building, 32 North State Street, where he will have the added facilities of complete X-Ray and Clinical Laboratories.

Dr. J. A. Saari formerly of Presbyterian Hospital of Chicago and Children's Memorial Hospital of Chicago has joined the Terre Haute Clinic of Terre Haute, Indiana, and has taken charge of the newly established department of Pediatrics. He will now be associated with Dr. D. R. Ulmer, Dr. C. E. Gilliland, Dr. W. P. Freligh and Dr. Wm. H. Miller.

News Notes

—The Tazewell County Tuberculosis Sanitarium, one mile east of Mackinaw, is under construction.

—Dr. Homer B. Millhon of Owaneco is said to have been found not guilty of malpractice in a suit for \$15,000 in the circuit court at Taylorville, September 3.

—Two new schools for crippled children, one at Lincoln and Belmont avenues, and one at Colorado and South Tripp avenues, Chicago, were opened, September 13.

—Twelve milligrams of radium disappeared from the proper place in the Evanston Hospital and was located by an insurance broker in a pile of refuse by means of an electroscope, last month.

—Dr. J. M. Juvinall of Weldon is said to have pleaded guilty to the charge of violating the national prohibition law and to have been fined \$500 in the U. S. district court at Danville, September 13.

—Dr. J. W. Russell of Chicago is said to have admitted to Capt. Howard, state prohibition enforcement officer, that he wrote 7,435

liquor prescriptions between Feb. 15 and March 25, at an estimated profit of over \$12,000.

—Kane County Medical Society met at Spring Brook Sanitarium, Aurora, August 25, and enjoyed a picnic on the lawn. Dr. Dean Lewis of Chicago gave a lecture on "Treatment of Fractures." Dr. N. Sproat Heaney gave an address on "Radium in Gynecology." Group pictures were taken after luncheon on the lawn.

—Drs. G. W. Downs and J. H. Fletcher are said to have served 80 days in Douglas county jail on conviction by Judge Wamsley for practicing medicine without a license and to have been immediately rearrested and fined \$100 each and costs at Decatur for practicing in Macon county.

—At the regular meeting of the Chicago Section of the American Chemical Society at the City Club, September 24, Dr. Arthur I. Kendall, dean of the Northwestern University Medical School, read a paper on "Bacteria as Chemical Reagents."

—The Physicians' Fellowship Club held the opening meeting of the session of 1920-1921, September 3, at which former governor Charles S. Deneen spoke on "Why Physicians Should Aspire to Public Office," and Dr. Harry R. Hoffman on "Why the Coroner Should Be a Physician."

—A contract for the building of the McDonough County Tuberculosis Sanatorium at Bushnell was awarded at a meeting of the board of Macomb, at a contract price of \$67,516. Work will be started as soon as materials can be delivered, and it is expected that the sanatorium will be completed by Aug. 1, 1921.

—There are fewer drug addicts and less illegal traffic in drugs in Chicago at present than at any other time within the last three years, according to a statement by Dr. Samuel A. Braun, chief of the federal anti-narcotic squad. The decline was ascribed to vigorous application of the Harrison law.

—The University of Chicago has inaugurated a graduate school of social service administration, beginning with the autumn quarter, October 1. Elementary, intermediate and full graduate courses are offered to nurses, social workers and others interested in social service.

In addition, two extension courses on related subjects will be given.

—The Lovell General Hospital at Fort Sheridan was ordered discontinued, effective October 1. About 120 of the patients are to be transferred to Walter Reed General Hospital, Washington, D. C., and the remainder will be cared for at the Post Hospital, Fort Sheridan. The hospital buildings are to be turned over to the commanding general, Sixth Army Corps Area; Chicago.

—The governor has named the following physicians to represent Illinois at the Fifteenth International Congress Against Alcohol: Drs. Frank B. Norbury, Springfield; George A. Zeller, Alton; George W. Mitchell, Peoria; William F. Grinstead, Cairo; Ralph T. Hinton, Elgin; Rachele S. Yarros, Charles F. Read, Herman M. Adler and H. Louis Singer, Chicago; Miss Amelia Sears, Chicago; Miss Jane Addams, Chicago, and Prof. Henry B. Ward, University of Illinois, Urbana.

—The North Side Branch of the Chicago Medical Society held a field day, September 15, at St. Mary's Training School, Desplaines, which was attended by a large number of the members of the Chicago Medical Society. After a tour of the building and grounds, several games of basket ball and a game of volley ball were played. An airship taxicab was exhibited. There was a drill by the training school battalion, after which a basket supper was served on the lawn. A brief business meeting was held, followed by moving pictures on the lawn, and dancing. Dr. Austin A. Hyden is president, and Dr. Ed White was chairman of the sports committee.

Marriages

ROY W. HARRELL to Miss Johnson, both of Galatia, September 1.

CHARLES H. CONNOR, Chicago, to Miss Esther M. Keeley of Plainfield, Ill., September 1.

BENJAMIN F. GUMBINER to Miss Anna Inez Bleiweiss, of Chicago, September 16.

ALFRED E. OWENS to Miss Stella M. Foulk, both of Princeton, September 11.

ALEXANDER J. DE GRAND to Miss Elizabeth McFarland, both of Chicago, September 11.

JOHN WILLIAM DREYER to Miss Rhoda Wheeler Denney, both of Aurora, Ill., August 21.

PHILLIP LOUIS COULTER, Major, M. C., U. S. Army, Fort Sheridan, Ill., to Miss Margaret Marie Rundlett, of Detroit, Minn., September 7.

HAZEL PETRIE MOSBY, Lieut., M. C., U. S. Army, to Miss Selma P. Hoppe, both of Rockford, Ill., September 7.

RALPH CHESSE PURNELL TRUITT to Miss Eleanor McConnell, both of Chicago, September 2.

Deaths

EDWIN S. DETWEILER, Chicago; Rush Medical College, 1888; a Fellow A. M. A.; aged 62; died, August 23, from carcinoma.

WILLIAM PATRICK DUNLANY, Oak Park, Ill.; Cleveland College of Physicians and Surgeons, 1897; aged 48; died, August 25, from arteriosclerosis.

FREDERICK K. EVERETT, Chicago; Chicago Homeopathic Medical College, 1888; aged 62; died, August 11, from paralysis.

ARTHUR M. SHABAD, Chicago; College of Physicians and Surgeons, Chicago, 1894; aged 52; died, August 23, from angina pectoris.

SOLOMON F. WEHR, Staunton, Ill.; Eclectic Medical College of Philadelphia, 1862; aged 86; a veteran of the Civil War; died, September 1.

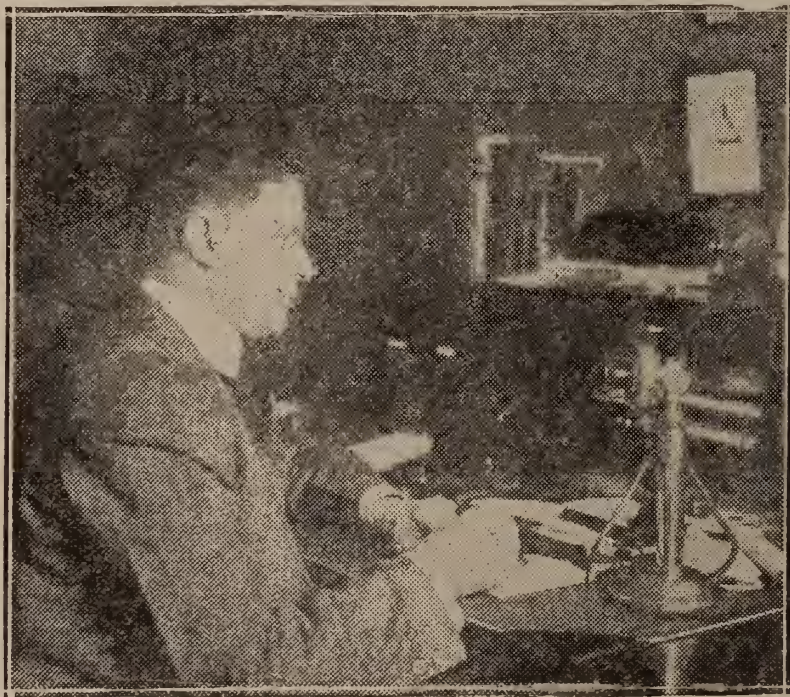
CLEMENT JOSEPH CULLEN, Oak Park, Ill.; University of Illinois, Chicago, 1911; aged 36; died September 5.

PAUL POLLACH, Chicago; Hering Medical College, Chicago, 1895; aged 59; at one time professor of nervous and mental diseases in his alma mater; died September 22.

JOHN P. BAHRENBURG, Nashville, Ill.; Homeopathic Medical College of Missouri, 1879; aged 89; died at the home of his daughter in Marissa, Ill., August 18, from senile debility.

WILBUR DANIEL COOK, Chicago; Hahnemann Medical College, Chicago, 1900; College of Physicians and Surgeons, Chicago, 1909; aged 57; a member of the Illinois State Medical Society; for many years attending physician to the John Worthy School; a specialist in diseases of the eye, ear, nose and throat; died, August 23, from cerebral hemorrhage.

EVERETT J. BROWN, Decatur; Northwestern University Medical School, Chicago, 1888; aged 55; for six consecutive terms treasurer of the Illinois State Med-



JOSIAH GINSBURG, Chicago; University of the City of New York, 1888; aged 56; died on a street car from heart disease, August 22.

RICHARD DUNN KITTOE, Chicago; Rush Medical College, 1902; died in Benton, Wis., August 21, from mitral insufficiency.

ical Society; medical director of the Protective League Life Insurance Company; one of the most prominent internists of central Illinois; son of Dr. Josiah Brown; an active member of the U. S. medical examining board during conscription; died, August 30, from spinal disease, after an illness of several months.

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Original Articles

SOME APHORISMS OF THE ENDOCRINES*

FOR THE BETTER INSTRUCTION OF THE INSTRUCTORS IN SOCIAL AND POLITICAL ECONOMICS

HORACE M. BROWN, M. D., F. A. C. S.
MILWAUKEE, WIS.

October, 1920

INVESTIGATORS AND AUTHORITIES

Caius Julius Solinus (III Century). First description of case of Pituitary disease. Polyhist. Cap. V.

Bedeu, Theophile de (1767), advanced the theory that each tissue or gland secreted its own peculiar substance, and that each was necessary to life.

Claude Bernard (1843) discovered glycogen.

Moritz Schiff (1856) found excision of thyroid of dog always fatal.

Sir William Gull (1873) and Ord. (1877) described myxedema.

Robert Graves (1835) described ex-ophthalmic goiter.

Addison: (1849) Addison's disease.

Theodor Kocher (1878) first thyroidectomy for goiter.

August Reverdin (1882) proved possibility of production of operative or surgical myxedema.

Sir Victor Horsley (1884) repeated Reverdin's experience with monkeys.

Sir Felix Semon (1888) proved cretinism and myxedema identical.

Brown-Sequard (1889-1893) experimented with testicular extracts.

Opie, Ssobolew and McCallum (1892-1909) worked on problems relating to the Islands of Langerhans in the pancreas.

Eugene Baumann (1896) discovered iodine in the thyroid.

Ivar Sandstrom (1880) proved para-thyroids necessary for calcium metabolism.

Leischman and Halsted: (1909) Tetany and the para-thyroids.

Oliver and Schaefer: (1895) Division of the pituitary.

Howell: (1898) Function of posterior lobe of pituitary.

Sajous: (1903) Work on the Hormonic organs.

Harvey Cushing: (1910) His work on the function and surgery of the pituitary body.

Up to the present time only Pituitrine, Epinephrine and Iodothyrene have been isolated.

No discovery in any field of knowledge is of value until it finds its application to man for the benefit of mankind. The gateway for the application of such knowledge is most frequently through the Science and Art of Medicine, but in the case of the application of our present knowledge of the endocrines, that method is inadequate; and if results are to be obtained that shall be of value to the race, the teachers of economics must share in our service of application, and we must first teach them.

The teaching of economics in all its branches in our universities is in a great degree false and inadequate, for the reason that its premises are not in accordance with now recognized and established physiological knowledge.

The artisan does not attempt to produce a satisfactory product, except he be thoroughly familiar with the raw material with which he works. Does the professor, whose material is the human animal, know the newer facts in regard to the physiology and psychology of *man*; the animal that is *his* raw material? If we are to judge from the products of much professorial reasoning, the answer is, "*No!*"

Has the time arrived for a new Vesalius, or a new Harvey to hold up the lantern of knowledge that the professor's mind may be illumined and made receptive for a new and better basis for his teaching?

*Read before the Tri-State District Medical Association, Oct. 4-7, 1920, at Waterloo, Iowa.

All human acts are the result either of instinct, or of conscious or unconscious cerebration,—what is called “thinking.”

With the first—Instinct—I have nothing to do in this paper. My thesis will be “With what do we think?”

Among the earliest theories with relation to the use of medicines for the treatment of disease or for the purpose of changing the dispositions of men or women, appears the thought that by feeding an individual parts of an animal that was particularly celebrated for fleetness of foot, or for bravery in the fight for life, the man thus receiving this flesh or parts of such an animal would soon begin to partake in his character of the characteristics of the animal whose flesh had been fed to him.

This belief has persisted in the history of medicine throughout all time and is common today in the beliefs of many peoples. It was perhaps from the observance of this belief among the people that Theophile de Bordeu in France about the year 1750 brought forward his theory that every tissue and gland of the body secreted its own particular and specific substance, and that every such substance was essential to the welfare of the body.

So far as we know, this was the first time that the idea of specific function was attached to the secretion or production of any of the tissues, and it was the beginning of the steps that led after a period of a little over 125 years, to the investigations that have given us our present knowledge of the ductless glands or the endocrine system, and of the tissues and organs which take so important a part in the maintenance of function and of growth in our physical economy.

It is not my intention to go minutely into the history of the development of our knowledge. If this paper is printed there will be attached to it a chronological list of the important investigators, the date of their work and the advances they had made in this line of study.

It is my purpose to show as briefly as may be possible what the endocrinic organs and tissues are, their various classes, and to renew in your minds, perhaps, your previous knowledge of the important position they play in the processes of cerebral activity.

The glands which produce a special secretion which activates some other organ or a series of organs at a distance from the gland or tissue

producing the secretion, may be classed roughly in three orders. First: Those that are entirely ductless and which produce but one secretion, which is poured directly into the blood. These are the supra-renal capsules, the thymus, the thyroid, the para-thyroids, the carotid gland, the pituitary body and pineal gland, and the spleen. Second: Those glands which produce secretions of a similar character but which have ducts for the transmission of other secretions produced by them, are the liver and the pancreas, in the latter of which are lodged the Islands of Langerhans. Third: Those which have mixed function but which are not to be classed directly in either of the two preceding divisions, are the hormonetic portion of the stomach and mammary glands, the ovaries and uterus, at certain times the placenta the testicles and probably the prostate.

There are undoubtedly other areas, glands or organs in the body which perform endocrinic functions which are yet to be discovered.

It will be seen that these organs belong to two groups, each having its own special form of nerve supply. The liver and the pancreas and some of the organs of the mixed group are supplied and regulated from branches of the vagus, while the others derive their innervation from the sympathetic system of nerves. Nevertheless, each group is self-composed and is, therefore, called autonomic; the group supplied by the vagus being known as the “vagal-autonomic,” while those glands which derive their innervation from the sympathetic nerve system are called the vegetative system, or the “vegetal-autonomic.” Not all the organs or tissues which produce endocrine material or hormones are in constant function, as for instance, the endocrinic function of the uterus or mammary glands is limited to special times and periods. Hormone arising from the placenta is only active during the period of gestation, but generally speaking, the secretions of the organs of the two systems are being constantly produced and being sent into the body by way of the blood, to activate distant organs in the performance of their own special function.

It is to be remembered that function of these hormone producing or endocrine organs is one that is performed entirely without consciousness, volition or control on the part of the cerebrating portion of the nervous system.

There is always in existence in the normal individual a condition of control called the “hor-

monic balance"; it being that state of equilibrium which exists between the stimulative or irritative action of the products of the endocrine organs of the vegetal-autonomic system, and the inhibitive action of those of the vagal-autonomic system.

The special products of the vegetal-autonomic system, like the thyroid, para-thyroid and the adrenals are mostly stimulants to function of distant organs, whereas the endocrine products of the vagal autonomic system are inhibitors. The foregoing general statement being granted, and the intimate relation existing between the function of these specific hormone producing tissues and organs, and the organs and tissues that are acted upon by their products, being understood, it will be clear to you that there is apparently no organ in the body which is not in some degree dependent for its functional activity upon stimulation sent to it by the hormonal substances derived from endocrine glands or tissues placed at a distance from it.

It is not the purpose of this paper to take up the problems of the varying results produced upon the body as a whole by the excessive action or continued diminished action of any of these glands. You are all of you familiar with the literature of hypothyroidism and hyperthyroidism, of the results of hypo-epinephrism and hyper-epinephrism, and of defective action of the different parts of the pituitary body. That part of the subject of the functioning of the endocrine organs does not relate to the thesis of this paper.

It is my purpose to draw your attention to the particular modification of the processes of thought that are the result of the failure of action of any or of all of these endocrine organs and to place before you if possible the problem which confronts all our past system of political and social economy which has been based upon a theory that human motives and human acts had their origin in a brain which worked by itself, uninfluenced by any other organs in the body.

It is not my intention to discuss the problems of conditions of mentality that come under the head of the insanities, or those that are the result of retrograde metamorphoses of the structures of the cerebrating organs in the skull, but only to attempt to attract attention to the one outstanding fact that the nature or quality of human ratiocination is dependent upon the harmonious functioning of the brain and the endocrine organs.

Let us examine for a moment an instance of what I mean by this. It has been shown that any emotion, passion, pain or grief stimulates the production of the product of the supra-renal capsules and that accompanying every shock, whether physical or mental, there is an increased amount of the product of the supra-renal thrown by it into the blood. No doubt the endocrine material from many other endocrine organs is in some degree also produced under such circumstances. It is probable, in fact well-nigh proven, that the presence of the supra-renal juice in the blood stimulates in a great degree the emotional portion of the brain, and it is safe to say that emotion produces intellectuation; so we are secure in stating that there can be no intellectual cerebration that has not been induced first by an impression, then by emotion. The series of events being: Impression, percept, emotion, concept, intellectuation, action.

Even as there exists an hormonal balance between the functioning of the two autonomic systems so also there must be—in order that intellectuation can take place with anything like normality—a balance existing between the capacity of cerebration and the endocrine impulse, that is produced upon the more intellectual side of the brain through its stimulation of the emotions.

We know perfectly well that increased function of certain of the endocrine glands produces strange deformities in the processes of growth of the tissues of certain parts of the body; e. g., the effect of a diminished supply of the secretion of the anterior portion of the pituitary body produces those strange symptoms known as hypopituitarism. It is quite as certain that the effect of an excessive supply in the blood of the products of the endocrine glands brings about modifications of the functioning faculty of the brain, just as they produce modifications of growth and function of other portions of the body.

The literature pertaining to this subject is rapidly increasing and the laboratory work tending to prove my last proposition is not wanting. What I have said thus far will serve as a foundation for the proof of some of my aphorisms in their entirety and partially for all of them.

An understanding of this relationship that exists between the action of the products of the endocrine glands upon the emotions and intel-

lectuations produced in the brain, furnishes an excellent basis for an understanding of the character of that group of men who are called "high-class morons"; although the term in its strict meaning does not apply to them. One has but to examine the figures and faces of the greater number of men and women who are engaged in promoting radical, anarchistic, socialistic and bolshevistic theories, to recognize that their faces show the stigmata of physical changes which are due in some degree either to hyperaction of the endocrine system or to a hypoaction of that system. It is a great pity that such men and such women are of a sufficiently high grade of intellect as to be capable of impressing their absurd notions of social order upon the youth of our country during the time when it is seeking education and culture in our universities.

The sophomore age of young men and young women is the one during which their brains are most affected by the functioning of the sexual endocrines and when, with their heads full of romance, they listen to the lectures of their professors—whom they are led to believe are very wise men—they absorb all sorts of absurd notions of social and political economy which are founded upon theories which give no recognition to the endocrine system of the body and are enunciated by men utterly ignorant of the physiology and psychology of their production and function.

The writings of some of the professors in some of our universities upon economic subjects give evidence of such utter ignorance in regard to matters depending for their solution upon a recognition of the need for harmonious function between the endocrine systems of the body and the cerebral part of the nervous system, that one, even with a superficial knowledge of this need, stands astounded at the professorial ineptitude.

At this time it is impossible for any man to dare to state that thinking is done by the brain only. But these theories are extremely plausible and to the romantic mind of the emotional youth and upon those peculiar minds of certain races—among others the Semitic and the Celtic—that are characterized by a greater love for emotion than for logic, they leave a lasting impression, and result in the effort on the part of the disciples of the plausible but ignorant speaker, to carry out his theories in the most absurd transgressions of social order and in threatenings of destruction of the civilization that has been

built upon a foundation of the experiences of all the ages.

The present widespread disturbances of social order are the direct result of the teachings of men, presumably qualified to lead, who, themselves suffering from a lack of balance between endocrine and cerebral function, teach theories of political economy, ethics and social economics, while utterly ignorant of the physiology of the body and of the relations of the endocrines to psychology. The present economic situation in the world is the direct outcome of perversion of endocrinic activity through exaggeration of the emotional side of cerebration at the expense of the intellectual side; for endocrinic activity stimulates emotion; and again emotion creates endocrinic activity and a vicious circle is formed.

It is unfortunate at the present time, when it is necessary that every educated person should be prepared to stand firmly upon a foundation of common sense in regard to social order, that the teachers in our universities promulgating such theories as I have mentioned, have the opportunity to be heard by so large a number of young women. For, say what you will, a woman remains always a woman, and it is an essential and unchanging factor of her nature, that her emotions are more precious to her than her intellectualizations. The results of such teaching falling upon the plastic nature of the naturally emotional part of humanity are leading to endless complications in social life, and while these complications can have no lasting term of existence through any great period of years, yet while they do last they are productive not only of great disorder, civic and moral, but also of notable degeneracy in the attitude of women toward those things which are naturally their normal function and normal purpose for existence.

We of our profession are being constantly brought face to face with some of the problems which are the result of the persistence of endocrinic action upon the emotional side of women after the menopause. Some of these are extremely amusing and some tragic. It has been my experience that women who reach the menopause go in one of three directions. The first and the greater number become the dear, sweet, lovely old ladies; another group still feeling the effects of the endocrinic stimuli of the ductless glands, become distinctly sexually immoral; while the third group becomes entirely derailed. The

mother instinct still persisting, they become meddling busybodies, useless interferers in everybody's affairs, wildly desiring newspaper notoriety thinking it to be notability, and a reputation for prominence. This latter class form one of the curses of modern society, and there seems to be no solution for the problem which they present.

Yet we of the medical profession can possibly forgive them, for with our knowledge of the endocrine function of certain portions of their bodies, we recognize the spark of truth which was enunciated by the wise Arabic philosopher, Moarbeda, and the philosopher of Bologna, who said their faults should be forgiven them for "they were the work of the womb."

Nor are men free from the effects of persistence of sexual endocrinic function, after the age when the spinal impulse is diminished. All about us we see instances of "old men in love"; with irritated prostates and partially functioning endocrine organs leading them to believe that they are in love, when really they are being deluded by the endocrine function and the irritable bladder. *Both disturbances might be removed by a proper use of a catheter.* If we are permitted to reason backward, from effect to cause, we shall conclude that the acts of many men with irritable prostates, even those in very high places, are the result of loss of endocrine-cerebral harmony. I sometimes think that we are now living under a prostatic administration, in an era of dominance by fat-thighed men and skinny-hipped women.

Again, as the result of the persistence of sexual endocrine production, we often see instances of the crime of the old man upon the body of the young girl or the little child. It is a problem. Is he to be blamed? It is not his intellect that is acting, nor the lumbar enlargement of his spinal cord; it is a nervous and cerebral system entirely out of balance owing to the loss of harmony in the endocrino-cerebral functions.

One is appalled when one stops to consider what the world, and particularly our own country, has suffered since the time of its establishment, from a fixed belief in the political philosophy of Jean Jacques Rousseau and his *ideas of equality*, and from the imitating philosophy of Thomas Jefferson, as to mankind. The former a sexual-endocrinic pervert, and the latter

a blind and worshiping follower of the former's errors.

In the statement of the aphorisms that I shall draw from the points in regard to the functioning of the endocrines in their relation to cerebration, I shall endeavor to point out some of the follies of these two men, that have been the foundation of absurd political theories, not only of our own country, but of the great group of anarchists, socialists, communists, bolshevists, *et id genus omne.*

It is a curious thing in the functioning of the endocrine organs in their relation to cerebration that the predominant and always recurring factor in every instance of disturbance of balance between the endocrines and the cerebrum, is the prominence of the sex factor. No one of the great social or politico-economic schisms that have ever appeared has been without its predominating sex problem. And for him who has read Mosheim's Ecclesiastical History, it is amusing to see how, throughout the ages since the beginning of the Christian era, with each century there have been from three to five outbursts of social or political disorder all running true to form, crowds of people following the lead of some perverted endocrinic maniac, whose ultimate purpose seems to have been to establish a cult for carrying out some special form of sexual or social perversion.

I beg now to offer for your consideration and perhaps condemnation a series of aphorisms which I have formulated as a result of my reading and the basis for which I have given you in what has gone before.

APHORISM NO. 1.

Reason by cerebration alone can take place only in the absence of any functioning of any of the endocrine organs, and the latter condition is not possible during life. Ergo: Purely cerebral reasoning is impossible, unless reason be possible after death.

APHORISM NO. 2

No man is born free.

Every human being is born into the world shackled by his inherited quality of presence of normal or abnormal endocrines, and is a prisoner to their capacity for securing development of body and brain.

He is throughout his life in the custody of his surroundings, these the result of forces over which he has no control, and which he can make

conformable to his wishes, only by limiting his desires to the conditions which surround him. His *Political Freedom*—the outward manifestation of which is his privilege of the ballot—is more often an expression of an emotion than a reasoned conclusion. Through life he is the captive of his emotions, not their ruler. He is born into a tyranny from which he can never escape.

APHORISM NO. 3

No two men are created equal, either before the law or otherwise.

1. The inevitable difference of inherited tendency, and post-natal differences of development of the endocrine organs, in any two individuals—all other factors of existence being eliminated from the argument—make it impossible for any two individuals of the genus homo to be equal in any capacity.

2. Before the law no two men are equal, because the law is a thing of human production, and may be compared to a ready-made suit of clothes; it fits nobody exactly, but it approximates the fitting of everybody. The nearer it approaches fitting any two people, the nearer it comes to giving to that particular pair "equality before the law." But it never quite fits, for after all it is a thing of human production, and the greater cerebro-endocrinic competency of one man makes him more capable of securing the better lawyer than that of another.

Solon said: "Laws are like cobwebs; if any trifling or powerless thing fall among them, they hold it fast, while something weightier breaks through them and is off."

APHORISM NO. 4

Equality of opportunity is impossible.

Opportunity unrecognized does not exist, and as the capacity to recognize opportunity is the *Result of Ability*, and ability the result of *Reason*, and reason the result of balance between, or of harmony between cerebration and endocrine function, any disarrangement of either in any one of two individuals destroys their quality of opportunity.

APHORISM NO. 5

The sum of the experience of mankind throughout the ages is the only basis for social order. This experience has shown that the more competent individual must control the less competent, in order to secure the greatest good for both, and thus the welfare of mankind.

The reverse of this proposition would be unthinkable, and its functioning would destroy all progress.

APHORISM NO. 6

The individual with the better condition of endocrine harmony is always the more competent. The individual with the greater perversion of endocrine harmony is always the less competent, both in body and in cerebrating faculty.

Thus: If this be true, competence for success in life is a physical matter, not one dependent upon pure mental capacity, for purely mental function or purely cerebral reasoning has no existence.

APHORISM NO. 7

Man does not reason with his brain alone, but through the mutual and harmonious functioning of the contents of the skull and all of the endocrines of the two autonomic (vagal and vegetative) systems.

APHORISM NO. 8

Any disturbance of any of these inter-related groups prevents cerebration in harmony with accumulated experience, and such cerebration if acted upon to motivate action is always destructive of social and political order.

APHORISM NO. 9

Errors of endocrine balance in males and females of the species have produced many feminine men and more masculine women. That instances of special ability in individuals of the masculine-female type have occurred, does not prove that woman can in any way function or take the place of man in the cosmos; nor does the converse of the sex conformation prove that man can take the place of woman. In both instances, the physical, physiological and psychical conditions are endocrinic abnormalities, and such types are in the mass failures in both sex characteristics.

However nearly the hen may approximate the production of a praiseworthy crowing, or however closely she may imitate the strutting of the cock, at certain times she must, whether she will or no, squat and lay an egg. This is a beautiful and most praiseworthy function and one in the performance of which the cock would make a ghastly failure, and it is one, in the performance of which the cock has no desire to rival the hen. Why should the hen wish to crow?

APHORISM NO. 10

Any theories of social or political economy

that are not founded upon a thorough understanding of the functions of the endocrines in their relation to the determination of the characteristics of the individual, and thus the determination of the nature of the masses, are as houses built upon the sands.

The artisan to produce good work must know the material with which he works. The artist must know his colors; the sculptor his marble. The privilege seems to be reserved only to the teacher of the vital theories of Economics, Social and Political, to attempt to produce peace and happiness, by promulgating theories concerning the foundation for which he is strangely ignorant, and of the nature of the material that is to be acted upon by his theories, he is indifferent.

APHORISM NO. 11

The quality of all cerebation, both emotional and intellectual, being dependent upon endocrinic and cerebral balance of function, and this balance being subject to constant derangement, the predicate of any postulate or proposition—except it be those of mathematics—is never conclusive and therefore no theorem of economics is or ever can be apodictically (finally) proven.

APHORISM NO. 12

Malingering both of bodily infirmity and of social discontent (and by this I mean exaggerated estimates of oppression, class consciousness, etc.) are evidences of endocrino-cerebral harmony derangement; and the latter is the most dangerous to society.

APHORISM NO. 13

Because man does not think by cerebation alone, no society or social order that is founded upon the commonly accepted basis of the origin of reason can be maintained without the employment of force. (Compulsion.)

The two fundamental laws that rule the destinies of all living things remain today as they were in the beginnings of time.

1. Get nourishment. 2. Reproduce your kind. Nourishment stored becomes property and demands protection. Protection of the less competent individual against the desires of the more competent means resistance. To live without compromise and arrangement; without a more thorough understanding of the originating causes of our acts and a willingness "to yield that strength may be"; without an understanding of the need for the "Noblesse oblige" prin-

ciple on the part of the more competent, means always the rule of the "law of Claw and Fang."

"The good old-fashioned plan,

That he shall take who has the power,

And he shall keep who can."

And thus we come back to the philosophy of the "Golden Rule."

APHORISM NO. 14

Compulsion (force) as a means of maintenance of the social order is always destructive and its action upon cerebation, through disturbance of endocrino-cerebral balance, destroys its own object by increasing the error of balance; or in other words, by bringing discord into the harmonious functioning of the cerebrum and the endocrines.

Thus the vicious circle completes itself and we find ourselves where we started and without a solution of the problem, except that the law of "experience of the ages" still holds, and in its presence theorists, reformers, uplifters, derailed-menopausics and those who believe that they can make man good by making laws; if their endocrino-cerebral function were in harmonious attunement would cease their ill-considered maundings, and perhaps retire like Tityrus to rest themselves "beneath the shade of some umbrageous beech," and leave the world to its solution of its problems by the slow process of the attrition of time and by the accumulation of experience.

CONCLUSION

If the aphorisms that I have promulgated are indeed true, and therefore defensible, the time has come when the teacher of ethics and economics in any of its branches, must abandon his present notions based upon the idea that man is a thinking animal, acting upon the impulses that are the result of his cerebation alone, and accept the facts that are demonstrable in regard to the endocrinic origins of thought. Having done this it is for the philosophers of economics to generate and elaborate a new system of ethics and economics founded upon the facts and not upon theories that have been rendered nugatory by the advances in physiological science.

I cannot close my paper without calling the attention of those of my hearers who have not given the subject of the endocrines much attention, to the colossal work done by our own Sajous of Philadelphia; to that monument of experiment and inductive reasoning that has

come from the hands of Cushing of Boston, to the collection of clinical cases illustrated by Bainbridge of New York, and the summaries of the progress of endocrine investigation coming from the pen of Col. Fielding H. Garrison of Washington.

Socrates said that he knew nothing except the fact of his own ignorance. Perhaps I have exhibited my own, but I assure you that in this regard I am like Socrates, I am quite aware of it. I have proved nothing; I have not tried to; but I hope I have given some among you food for thought.

311 Prospect Ave.

A RATIONAL PROGRAM FOR THE PREVENTION OF THE POLLUTION OF OUR LAKES AND STREAMS.*

PAUL HANSEN

Of Pearse, Greeley and Hansen, Consulting Engineers.

CHICAGO

Each year, as there develops a greater tendency toward concentration in urban communities, the lakes and streams of the state become more and more obviously polluted by sewage and industrial wastes. They become in time totally unfit for any use whatever and they produce foul odors which render habitation near them almost impossible. They become wholly lost for pleasure purposes and the value of property along their banks is greatly depreciated. Water supplies drawn from polluted streams or lakes are unnecessarily endangered even although it be recognized that the water must be filtered and sterilized before delivery to the consumers.

There are a number of notable examples of gross waterway pollution in the State of Illinois, the most prominent of which is, of course, the extensive pollution of the Illinois river by the Sanitary District of Chicago. Other notable cases are the pollution of the Sangamon river by Decatur, the pollution of Sugar Creek by Bloomington, the pollution of the Fox river by a number of communities, principally Elgin and Aurora, the pollution of Boneyard Creek by Champaign and Urbana and the pollution of the Des Plaines river by a number of communities along its course.

In several of the cases here mentioned, programs have been worked out for the elimination

of the pollution by the installation of adequate sewage-treatment works. Chicago must spend many millions of dollars for this purpose and even the relatively small town of Decatur must spend upwards of a million dollars.

Until recent years, waterway pollution has been permitted to go on more or less unchecked until riparian owners have been goaded by foul conditions and property losses to bring suit for the recovery of damages. It has been the custom of municipalities to fight such suits until it became evident that the cost of damages and the cost of litigation would exceed the cost of sewage-treatment works. It is obvious at once that this is a very wasteful process and that some better method of regulating the matter of waterway pollution must be devised.

In order to better state the requirements with reference to legal control over waterway pollution, it is desirable to give some consideration to the character of waterways and the effect of pollution. There are two extreme views on the functions of waterways. One is that a waterway should be regarded as a means for watering the country through which it flows or in which it lies. That is to say, its water should be available for any purpose for which water is ordinarily used without jeopardizing life or health. The other extreme point of view is that waterways should be regarded as drainage courses or receiving basins for removing the wastes from communities and that for this reason they can not be regarded as watering the country and that water supplies for domestic purposes must be derived from springs and wells.

Obviously both these extreme views are untenable. No waterway can be maintained in its pristine purity with the present density of population in the State of Illinois. On the other hand, streams must be used for water supplies, especially by large cities, because it is not always practicable (in fact, rarely practicable) to obtain a sufficient quantity of water from springs or wells.

The correct conception of the function of waterways is midway between these two extreme views, namely, that a waterway must be regarded as both draining and watering the territory through which it flows or to which it is contiguous. Some pollution of waterways is inevitable, nevertheless their pollution can be so

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regulated that none need be polluted to an objectionable degree. The development of the art of water purification by sanitary engineers has made it entirely practicable to purify the waters of surface streams and lakes so that even when dangerously polluted and turbid they may be rendered clear, colorless, and practically free from organic life, including bacteria. The exact balance that should exist between the function of sewage-treatment works on the one hand and water-purification works on the other hand, is something that can not readily be laid down by any exact rules. Some efforts have been made to quantitatively state a permissible amount of pollution that will not place too great a burden upon water-purification works, but none of these statements have thus far been generally accepted. In any event, the decision must rest upon a careful consideration of all the local factors.

The use of waterways as sources of domestic water supply is not the only consideration upon which may be predicated the degree of cleanliness that may properly be demanded with reference to them. Many streams in the State of Illinois, for example, are not used as sources of either public or private water supply and in all probability will not be so used at any time in the future. There is, however, another very important use to which streams may be placed, namely, for recreational purposes. Growing importance is attached to this use in recent years and every summer there may be found scattered along our most picturesque streams and lakes numerous camps and cottages. This form of summer vacation is comparatively cheap and a normally healthful means of recreation. Vacationing along our waterways, especially near the larger cities, should be regarded as one of the means of improving the health tone of our urban communities and to this end special consideration should be given to maintaining the cleanliness of streams within reach of the cities. The mere mention of this item will at once bring to view the utter neglect of many of our most beautiful streams. Not only are they befouled with sewage and industrial wastes, but their banks and the land in their proximity are rendered hideous by the practice of using stream banks as public dumps.

Under this head one may ask how high a degree of purity should be demanded in a stream which is extensively used for recreational pur-

poses, but not necessarily for public water supply. While it may be recognized that streams not used for water supply and not used for recreational purposes need be kept in only that degree of cleanliness that will prevent them from becoming malodorous, unsightly and hence a public nuisance, in the case of streams available for or already extensively used for recreational purposes, a much higher degree of purity may be demanded. There should be no sensible evidence of pollution at any point and all sewage entering such streams should be sterilized so that there will be no great influx of infectious matter. Of course, a drinking water standard can not be maintained, but if a stream is to be used for boating, fishing and bathing the quality of the water should be up to the standard of that at our best bathing beaches along the lake shore and the ocean. To accomplish this, especially along the smaller streams, demands that sewage be treated in such manner that the final effluent will be clear and non-putrescible and as already indicated, a sterilizing agent should be added to practically eliminate any matter of an infectious character. As in the case of streams used for public supplies, no hard and fast rules can be established and, therefore, a decision as to what sewage treatment works are necessary in any given case must always be dependent upon a careful consideration of all local factors.

Another function of waterways to some extent allied with their use for recreational purposes is the propagation of fish life. In certain parts of the country this function would also include shellfish, which from the sanitary point of view, are far more important than fish, because shellfish are frequently eaten raw, whereas fish (at least in this part of the globe) are not so eaten. Some of the streams of Illinois are very valuable for their fish, notably the Illinois river, the fishing interests of which are said to be second only to the salmon fisheries on the Columbia river in the State of Washington.

The relation of waterway pollution to fish life is not generally understood. Pollution may both injure and promote fish life. If the pollution is so great that all but a small portion of the oxygen in the water is absorbed by the decomposition of the polluting matter, then the fish are killed by suffocation. Moreover, if the polluting matter is largely in the form of finely divided

slimy suspended matter, it tends to clog the gills of fish and injures them by the mechanical clogging of their respiratory organs. Natural turbidity is also injurious and prevents the existence of certain kinds of fish in muddy streams. Where the pollution is not so great as to produce the above objectionable results to fish life, the polluting matter or the various organisms that thrive on the polluting matter, constitute a valuable fish food which tends greatly to augment the fish yield. Both the injurious and beneficial effects to fish life are exemplified in the Illinois river. In the upper Illinois river the pollution has practically exterminated fish life, while in the lower Illinois river it has been on the increase. The danger, however, is that the pollution extending down stream continually, due to its increasing volume, more and more restricts the breeding grounds for fish. Another unfavorable influence on fish life of a polluted stream occurs in that zone of the stream which at times of low water is grossly polluted and at times of high water retains a sufficient oxygen content to support fish life. The fish, in their migration up stream, may get into this zone during high water and may there be overtaken by a suffocating condition incident to decreased flow and corresponding increase in the intensity of pollution. At such times, many thousands of fish are killed, float to the water's edge where they strand, putrefy and create exceedingly foul odors.

Streams should also be available for various industrial purposes. Ordinarily, industries do not require a water supply of a high degree of purity. The most severe demands in industries is primarily for a clear, colorless water free from objectionable mineral characteristics. Such waters may generally be obtained from streams and lakes after suitable filtration. The pollution that ordinarily enters waterways, excepting those which are grossly polluted, does not affect the water for industrial uses.

On the other hand, industrial wastes are becoming a greater and greater factor in stream pollution. Such wastes, as a rule, do not have the infectious character of city sewage; many, in fact, are virtually sterile when leaving the factory drains, but they contain organic matter, which soon undergoes putrefactive decomposition when not adequately diluted with clean water and may create foul odors, destroy fish life and render

streams entirely unfit for recreational uses. Among the most important industries contributing to stream pollution in this state are corn products works, tanneries, slaughter houses, strawboard mills and paper mills. In the rural districts, especially along smaller streams, canneries and cheese factories produce very foul-smelling wastes which do not receive adequate dilution, especially in the summer time.

Having reviewed the functions of streams, the manner in which they are most frequently polluted and the evil results of such pollution, there may now be considered the matter of appropriate legislation directed at the protection of the streams of the State to the end that they may be cleaned or not become unduly contaminated. Present legislation in Illinois is unscientifically conceived, is not entirely clear as to what degree of cleanliness is to be maintained in our streams and is unwieldy and difficult of proper application. The general sentiment of the people of the State is fairly well reflected in the State Criminal Code, Chapter 38, paragraph 221, Section 3 of Hurd's Revised Statutes, which among other definitions, defines as a nuisance corruption or rendering unwholesome or impure the waters of any spring, river, pond or lake, to the injury or prejudice of others. The penalty on conviction for causing a nuisance under the State laws is a fine not exceeding \$100 for the first offense and a like sum for subsequent offenses and not over three months confinement in the county jail. The nuisance may also be abated upon order of the court by the sheriff at the expense of the defendant and the law specifically states that it is no defense that a nuisance is maintained by virtue or permission of any state law.

In practice it has been found difficult to enforce this state law against municipalities and large corporations. Usually the affected parties are a number of riparian owners each of whom is damaged for relatively small amounts, yet the aggregate damage may be very large. They generally find great difficulty in getting together for the purpose of raising funds for bringing joint suits for abatement or damages. Moreover, it is necessary to keep up continuous litigation requiring repeated payment of damages before a municipality or corporation is forced into the situation where it is cheaper to build treatment works than to continue to fight damage suits.

The Civil Administrative Code adopted in 1917 gives the State Department of Public Health certain authority with reference to stream pollution, but in language that is not altogether clear and definite and which authority moreover conflicts with authority granted to the Waterways Division of the Department of Public Works and Buildings. This provision of the Civil Administrative Code gave to the Department of Public Health the power to "act in an advisory capacity relative to public water supplies, water-purification works, sewerage systems and sewage-treatment works and to exercise supervision over nuisances growing out of the operation of such water and sewage works and to make, promulgate and enforce rules and regulations relating to such nuisances." Under the old powers of the State Department of Public Health which provide that the then State Board of Health "shall have authority to make such rules and regulations and such sanitary investigations as it may from time to time deem necessary for the preservation and improvement of the public health." There were adopted rules and regulations which read as follows:

No municipality, district, corporation, company, institution, person, or persons, shall install or enter into contract for installing * * * sewers to serve more than 25 persons until complete plans and specifications fully describing such * * * sewers have been submitted to and received the written approval of the State Board of Health and thereafter such plans and specifications must be substantially adhered to unless deviations are submitted to and receive the written approval of the State Board of Health.

No municipality, district, corporation, company, institution, persons or person, shall make or enter into contract for making, alterations or changes in or additions to any existing sewage-treatment works serving more than 25 persons, until complete plans and specifications fully describing such alterations, changes or additions have been submitted to and received the written approval of the State Board of Health, and thereafter such plans and specifications must be substantially adhered to unless deviations are submitted to and receive the written approval of the State Board of Health.

These rules would seem to be more fully validated under the provisions of the Administrative Code.

The old Rivers and Lakes Commission Act gave that commission certain powers with reference to the abatement of stream pollution but the act was worded in an ambiguous way so that it was uncertain whether it had application to

the destruction of fish life solely, or to other evil results from waterway pollution. The Legislature in 1919 amended the Rivers and Lakes Act then being administered by the Waterways Division of the Department of Public Works and Buildings so as to cover pollution by industrial wastes only, but clearly extended the authority of the Division to take cognizance of evil results other than destruction of fish life. This provision of the law reads as follows:

It shall be the duty of said Department of Public Works and Buildings, to see that all the streams and lakes of the State of Illinois, wherein the State of Illinois or any of its citizens has any rights or interests, are not polluted or defiled. It shall not be lawful for any person, persons, firm, or corporation to throw, discharge, dump, or deposit, or cause, suffer, or procure to be thrown, discharged, dumped, or deposited, any acids, industrial wastes, poisonous effluent or dyestuff, clay or other washings, or any refuse matter of any kind or description containing solids, substances or matter discoloring or otherwise polluting any navigable lake or river of this State, or lake or river connected with or the waters of which discharge into any navigable lake or river of this State; provided, however, that this shall not be interpreted to prevent the discharge of water flowing from streets and sewers or ordinary household sewage passing therefrom.

The original provision in that part of the Criminal Code relating to nuisances, intended to prevent waterway pollution expresses even today fairly clearly the will of the people of the State with reference to the maintenance of the cleanliness of its public waterways. That is to say, the public does not object to a degree of waterway pollution, provided such pollution is not "to the injury or prejudice of others." Perhaps this phraseology should be varied somewhat so as to express the recognition of the fact that all pollution, even though it may be somewhat to the injury or prejudice of others, can not be prevented. This is exemplified in the possible case of an individual who, or community which might wish to use the water from a stream for domestic purposes and regarded it as prejudicial if it became necessary to purify such water in order to render it safe. What really is wanted is clean waterways containing no pollution which will *unduly* jeopardize a *reasonable* use of our waterways by riparian owners or by the general public. The actual decision as to what constitutes a clean waterway or the undue jeopardy of the reasonable use of a waterway by riparian owners and

the general public should be determined by specially qualified persons in the employ of the State.

Many states have very wisely given their State Departments of Health exclusive authority over the maintenance of the purity of inland waterways usually under some law which gives the Department a degree of latitude in determining what constitutes the most economical and satisfactory solution in any given case (all pertinent factors being taken into consideration) and which further provides for hearings and references to referees in disputed cases. Perhaps the best of such laws is that in operation in the State of Ohio. The law is relatively simple, direct and workable. Furthermore, it has been sustained by the Supreme Court of the State as to its validity and constitutionality. In general terms, it provides that when the State Department of Public health finds upon investigation that a municipality, corporation, institution or individual is unduly polluting a stream, it may issue an order requiring the cessation of such pollution within a reasonable time and may authorize the issuance of bonds for the purpose. If the affected parties so desire, they may have a hearing which may or may not result in the modification of the Department's order. If the affected parties still feel that they are not receiving justice they may refer the matter to a referee commission of three sanitary engineers, one to be appointed by the State Department of Public Health, but not regularly employed by the Department, a second to be appointed by the affected parties and the third to be appointed by the two engineers appointed as above. The decision of this commission is to be regarded as binding and its expenses are to be defrayed equally by the State Department of Health and the parties affected.

It is not the intention of this paper to specifically prescribe a law applicable to the State of Illinois. This is obviously a matter for lawyers and lawmakers. However, it may be said from the technical point of view that the limitation of waterway pollution is most effectively and most equitably carried out when under the general supervision of some central expert authority operating under somewhat elastic general laws which represent in broad terms the will of the people.

39 W. Adams Street.

DISCUSSION

MR. LANGDON PEARSE, Chicago, the sanitary engineer of the Sanitary District of Chicago, states that we have realized for a long time that the Illinois river was polluted, but at the same time it is a question of economics for the state to what extent it should be cleaned up. He believes there never will be a demand for drinking water from that river; that health officials wouldn't stand for it. He doubts whether it will ever be fit for bathing. It would be cheaper to give free baths than to try to make the whole river fit to bathe in. On the other hand, it can be kept reasonably clean from the standpoint of boating and made absolutely free from nuisance which does exist in certain local points, particularly behind dams.

At the present time the Sanitary District is entering upon a program for clearing up the river. This is the third step in the development of the district, the first being to construct the drainage canal and reverse the Chicago River, the second to divert the sewage from Lake Michigan along the water front of Cook County. The first two have been practically completed.

It is entirely practical to clean up a stream. The whole question comes down to what cost the community is willing to pay. In the Rock river here the pollution is slight, but the particular problem seems to be the transfer of such nuisance beyond the noses of the particular people who are affected. That is easily done by the construction of sewers. The next step is to remove the source of pollution and that is done by screens, mechanically or by settling basins. If further treatment is needed, we frequently use chemical precipitation. There is a development for the use of acid whereby you can precipitate a great deal of grease. There is a question yet whether that will be a commercial success. Then we come to other means of treatment which are available to make an effluent that fish can live in. We do that by biological means in the simplest form by sewage farms, a few of which still exist in this country and elsewhere, but in general by more intensive means, by putting the sewage, either after settling or before, on beds of clean sand, perhaps three feet deep or on beds of crushed stone five to ten feet deep. The sewage is sprinkled on the surface of the stone by nozzles.

The general trend of the whole sewage treatment work at the present I think is to get concentration of work with moderate costs. We haven't entirely succeeded as yet, but we do feel that there will be modifications in different processes that will bring the cost down very materially. We are carrying on experiments in Chicago. We are also working on industrial sewage. The industrial sewage field in Chicago alone is a very large one. The packing houses and the tanneries are carrying on work to determine how best to handle the waste from those trades.

It has been a lucky thing for this state that there have been, in general, water supplies available other than the streams, or the citizens would have been forced long ago to have spent a deal more money than has been spent, in cleaning up the streams and purifying their waters.

DR. WEIS, La Salle: Where we live, we are the unfortunate recipients of the sewage that comes down the Illinois river. Our water supply we must take indirectly from the river. We get our water from shallow wells and in the spring when the water is high, our wells are entirely covered by the Illinois river. This water is not fit to be used in any way. Of course, it is filtered through the ground, but when the water is high, it will get in the manholes up above. My chemist examines the water every day when the surface of the top of the wells are covered with the river water.

Within the last two or three years there are more complaints about the bad odor coming down the river than for ten or fifteen years prior. Is it because they are discharging more sewage down the river, or is it because it is not diluted as it should be? It is certainly great to hear that in the near future we can expect something different. God speed the day.

MR. FERGUSON, Springfield: The State Department of Health is constantly urging communities to install public water supplies and sewer systems. Statistics show that the installation of such improvements cause the abandonment of wells, insanitary privies and cess-pools and brings about marked improvement in the public health. We endeavor, whenever a sewer system is to be installed, to make a field examination of the stream to ascertain the character of the stream, the nearness of dwellings to that stream, and the use of the land bordering the stream. That is important if cattle are pastured along the stream. With this information the department is able to intelligently review the plans for the proposed sewer system and the treatment plan. We endeavor to co-operate with community engineers and the city officials and make suggestions as to what form of treatment will be necessary to prevent objectionable pollution.

This has worked out quite well wherever the plans have been submitted to the department. Previous to this work, however, and the establishment of the division of engineers, many plants and many sewer systems have been installed where enough consideration was not given to the method of treatment. As a result, we have quite a number of streams highly polluted. There is no agency which has jurisdiction over the pollution of streams which can take active steps to have a polluted stream made clear. Sooner or later, some state agency or some agency must be given suitable jurisdiction over the question of stream pollution so that the stream may not be polluted and the streams that are now polluted may be corrected at a minimum expense. Possibly, this agency might well be the State Department of Health, which has already established laboratories for analyzing sewage and water and it also has a division of engineering to make the necessary field study.

MR. HANSEN (closing discussion): It is true that it is not always desirable to build works for the treatment of sewage or for the complete treatment of sewage on account of great costs, but in such cases it is usually presumed that the offending party or com-

munity will then be in a position to pay damages or acquire the necessary riparian rights so that nobody's interests are jeopardized.

Mr. Ferguson brought out a most interesting point, namely, what attitude shall the State Department of Health take with reference to stream pollution when it must at the same time recognize that the installation of sewerage systems is a very great factor in the preservation of public health. It is a more important matter with reference to public health than the prevention of stream pollution, and it is sometimes (this was my experience while engineer of the State Department of Public Health), desirable to permit a city to pollute a stream so long as the rights of riparian owners are not unduly jeopardized, but the community must recognize that when that stream becomes developed, or when it is so used that the rights of others are jeopardized, then the community must be prepared to do its share and clean up the stream by putting in proper sewage treatment works. That is, we take the view that a person may dump his garbage, or whatever it might be, out onto a vacant lot so long as nobody is injured by that practice, but he has no right to dump his garbage into his neighbor's yard simply because he finds that is a rather cheap way of handling his particular garbage problem.

EARLY DIAGNOSIS OF SYPHILIS*

C. C. KOST, M. D.

DIXON, ILL.

In view of the fact that there are between 6 and 10 million syphilitics in the United States we should begin to realize that in the problem of syphilis it is imperative to secure an earlier and more efficient diagnosis of the disease than is done at the present, and I may say in addition, a more generalized effective treatment. This should be the keynote of our endeavors. At the same time to make a diagnosis of syphilis is a serious affair and not one to be entered upon rashly. We should be quick to suspect syphilis and a step slower to diagnose syphilis. Because of its frequency, of the many diseases which it may imitate, of its complications and of its late serious consequences, it is one of the most important medical diseases which we have to combat.

Every field of medicine is directly invaded. No organ of the body is exempt. No disease merits the designation "contagious" more than syphilis. It is originally propagated only by actual contact. Notwithstanding its multiform and remarkable varied manifestations it remains throughout them all the same specific *affection*,

*Read before the seventieth annual meeting of the Illinois State Medical Society at Rockford, May 19, 1920.

due, as demonstrated, to an *infection* by a single organism. The unity of syphilis therefore can no longer be denied. From time to time many different organisms were described as the true causes of syphilis.

As our late Dr. Osler well remarked: "The story of the search for the cause of syphilis is a tale to make the judicious grieve." Lassar in 1905 stated: One hundred and twenty-five causes of syphilis have been established during the last 25 years. Not until March 3, 1905, when the protozoologist, Fritz Schaudin, and his confrere syphilologist, Erich Hoffman, demonstrated the presence of spirilla in a chancre. The publication of the first reports led to an immense amount of work, and the discovery was speedily verified from many sources. The organism was at first called "*Spirochaeta pallida*," but shortly afterwards upon a basis of morphologic characteristics it was changed to "*Treponema pallidum*," the latter name of which has been adopted by the International Committee on Nomenclature.

The appearance of the organism is that of a spirally wound wire, 4 to 14 millimeters in length, $\frac{1}{4}$ to $\frac{1}{2}$ millimeter in width. While the particular narrow width renders it difficult to detect them, the regularity of the spires affords a marked distinction. No internal structure can be demonstrated; it is extremely motile and has considerable lateral flexibility. Only one form has been found.

Syphilis may be either congenital or acquired. Inasmuch as it is now generally believed that the child which suffers from "S" at birth is really infected in utero, so it is obvious that the expression "Hereditary S" must fall into disuse, and the term "Congenital S" is the correct one, and no father can give his unborn child syphilis, except by first giving the mother syphilis. To avoid much trouble we should remember congenital syphilis is caused by an infection with the same organism that is found in acquired "S." The majority of cases are acquired and 94 per cent have the initial lesion upon the genitalia, the infection being the result of sexual intercourse.

In the remaining 6 per cent the primary sore is situated upon some other portion of the skin or mucous membrane, termed extragenital chancre. In exceptional instances no chancre is

seen. However, as a general rule close examination will reveal the presence of a lesion in an obscure location, as in the urethra or upon the cervix. At times, too, the initial lesion may be so small and insignificant as to escape notice. It should be distinguished from chancroid, herpes progenitalis, cancer and scabies. This sore is antedated by a period of incubation following the exposure and previous to the appearance of the chancre at the site of inoculation, which averages between 20 and 40 days, with a probable average of about 4 weeks. The sore is usually single, but may be multiple, size varying from that of a split pea to a beefy patch as large as the thumb nail.

Induration is the most striking characteristic of most "S" chancres, sometimes lacking, sometimes late in coming, at other times it is the first appearance of the sore. It has been customary to divide the course of syphilis into 4 stages; primary, secondary, tertiary and quaternary or parasyphilitic. Would it not be far better to consider as our excellent observers, including Geo. Henry Fox, has, that "S" has but two phases: early and late? The term parasyphilitic should be dropped entirely since it has been conclusively shown that the so-called parasyphilitic lesions are truly syphilitic.

For the correct diagnosis of syphilis we have at our command both clinical and laboratory methods. Unfortunately, there is a serious tendency to absolutely ignore the clinical diagnosis and to exploit the laboratory diagnosis, a tendency that is certainly a very dangerous one, for neither laboratory men or methods are infallible. When one considers the magnificent work that has been done by Johnathan, Hutchinson, Fournier and scores of the older syphilographers, it can readily be seen that the clinical side should never be entirely ignored.

In the clinical diagnosis the history of patient should always be taken carefully and physical examination made. The most valuable of the laboratory methods are the testing of blood serum for complement fixation, examination of spinal fluid, the luetin test, various Roentgen ray findings, and last and most important of all is the demonstration of the *treponema pallidum* in the lesions.

Our attention has been called by "Neisser" to the fact that the *treponemata* can be found in

various lymphatic structures by the time the chancre has manifested itself; occasionally before the chancre appears there may be marked systemic disturbances. But as a general rule during the period of incubation there is little, if any, general disturbance. So the definite diagnosis in the early stage, may I say, before the treponema has spread to the lymphatic system near the primary sore and before the serologic reaction is positive, is the *one and only time*, that taken advantage of, may lead to success, and it is the time for radical cure if such is possible. So it cannot be stated too emphatically that the diagnosis of "S" should be made at the very earliest possible moment. Every sore on the genitals or elsewhere is or should be open to suspicion of chancre and examined for treponemata. An indolent sore on the finger of a nurse, a dental surgeon or a physician is all too often the precursor of a systematic treponemata infection, and as time is a factor of paramount importance, the necessity for examination should be emphasized.

Now the causal organisms may be demonstrated in four different ways, first, by the dark field illuminator; second, by staining secretions from active lesions; third, by an india method, and lastly by staining the organisms in the lesions, but I shall make mention of only one which should totally displace all methods. I speak of the "*Dark Field Illuminator Test*." The Dark field illuminator is an attachment furnished for the microscope which is substituted for the condensor, and allows no rays of light to pass through the field except those that outline the delicate translucent spirilla forms of these parasites. The Dark field has several great advantages: in the vast majority of instances it will enable an absolute and early diagnosis of syphilis in a very few minutes. Again, this instrument affords much the best chance of showing the organisms, for if they are in the serum they cannot be missed by a trained observer. It must always be borne in mind that if a lesion has been treated with antiseptics so many of the treponema may have been killed that they cannot be demonstrated. In such instances give a thorough irrigation with normal saline, and apply wet dressings of same for 12 hours or more before examination *or* prevent patient from using local applications for a day or two and then reexamine. For a satisfactory examination it is necessary to

have clear serum. Often the chancre is so tender that it cannot be squeezed hard enough to exude clear serum, so the surface of the lesion should be rubbed or teased slightly to permit of the escape of a little serum, without drawing blood. In very stubborn cases blood may be collected, allowed to clot and then clear serum used, *or* obtain material by puncture of the chancre. So the early diagnosis is made upon the history of exposure, period of incubation, clinical appearances and last and most important, the dark field test for treponema pallidum which, if demonstrated in secretion beyond question, is sufficient evidence of syphilis.

Constitutional treatment exercises controlling influence upon the chancre and should not be resorted to until a positive diagnosis is reached. May I also say that the Wassermann complement fixation test is not available until five or six weeks after the first appearance of the initial sore. Statistics from the late war have brought out the value of Wassermann tests in early diagnosis of relapses, as in most syphilitic infections which had apparently been cured, the first symptom of a relapse is the return to a positive Wassermann reaction and this may occur weeks and even months before marked clinical symptoms are noted. This is extremely interesting and we sure should profit by such findings. The physician who waits for secondary symptoms before beginning treatment, when it is possible for him to have a dark field examination made or the Wassermann test applied is criminally negligent in my opinion, for with these aids it is possible to diagnose correctly practically every syphilitic infection before the appearance of secondary symptoms.

So with syphilis an actual condition, it must be recognized early and treated early if its economic results are to be prevented. The importance of demonstrating the "treponema pallidum" in early syphilis, when the serum reaction is negative, a time when abortive treatment by neoarsphenanine and mercury, is most likely to be successful should be emphasized; if not, we lose the benefit of the one psychologic moment in the life history of syphilis when we can seize our real opportunity. Serum should, in all early cases, be properly obtained and given the dark field test. Thus our problem is early recognition and early

treatment and extension of facilities for early diagnosis and treatment.

As a professional body, let us be honest and acknowledge we have not spread the vital importance of early diagnosis. It has taken a world war to impress on us that the modern conceptions of syphilis have not been taught in our medical colleges. We have zealously striven to whitewash the episodes occurring in the wrecks due to this disease. We have had clinical characteristics and endless discussions as to secondaries and tertiaries and neurosyphilis, forgetting that we were proving our guilt in this very manner. And now we must scrap our clinical differences and turn to laboratory diagnosis and the finding of *treponema pallidum*. I do not mean here the serologic diagnosis, for then we are losing our great opportunity.

SARCOMA OF THE KIDNEY.*

JOSEPH WELFELD, M. D.
CHICAGO.

I desire to report a case of sarcoma of the kidney and follow same with a brief discussion of the subject. This case was under my observation about one week with diagnosis of sarcoma corroborated by Dr. L. E. Schmidt.

History. Female child, aged 2 years, Jewish, American born, resident of Chicago.

Family History: Mother died in 1917 from acute parenchymatous nephritis, complicated by multiple breast abscesses, requiring extensive incisions.

One brother died of septico-pyemia following appendectomy.

Two sisters, ages 6 and 17 years, living and well. Father well, living and in good health.

Personal history: Negative except that child was bottle-fed through entire infancy. Normal in growth and in weight for age.

Previous history: Whooping cough and measles simultaneously when child was year and a half old. No other diseases.

Complaint on admission: Rapidly losing weight during previous two weeks, no appetite, great exhaustion following exercise, sleeplessness. Father and others noticed child had a large abdomen, which seemed to daily increase in size.

Examination on admission: Weight, 28½

pounds. Child lies perfectly quiet except during examination, then cries. Responds readily to any question. Intelligent for age. Child walked about when permitted. Objective anemia.

Head: Pupils normal. Mouth and throat negative except for slightly enlarged tonsils (not pathological). Nose and ears negative.

Neck: Few posterior cervical glands on both sides.

Chest: Heart and lungs negative.

Abdomen: Varicose veins over entire abdomen (Caput Medusæ). Distinct mass visible in the left half of abdomen extending to the middle line and down as low as the brim of the pelvis. Mass was not movable on respiration or by manipulation. Several irregularities could be noted on the surface of the tumor, especially in the upper part. No extreme tenderness of the mass was noted. Peritoneal fluid present, which shifts with posture.

Extremities: Negative.

Reflexes: Negative, superficial and deep.

Blood examination: Hemoglobin, 70 per cent; leucocytes, 8400; coagulation time, normal; smear, negative.

Urinalysis: Squamous epithelium and few white cells present. No albumin or casts. Blood microscopic.

Clinical course: Child in hospital for one week and showed no serious symptoms.

Operation: Abdominal route was chosen, tumor identified as kidney tumor and readily removed. Patient removed from operating room in one hour.

Post-operative history: Rapid, uneventful recovery, patient leaving hospital on 14th day. Intensive x-ray treatment given periodically every two weeks for two months following.

Sequelæ: Ninth month after the operation child developed gastro-intestinal disturbances, urinary suppression and temperature of 102 to 104. Pronounced cachexia. Examination at this time showed another large mass on the other side, similar to the mass that was removed. The reason this was not noted before was the disappearance of the patient from observation for approximately two months, the mass developing between the seventh and ninth month.

Symptomatic treatment was administered for the next two weeks.

Child died eleven months after the operation.

*Read before North Shore Branch Chicago Medical Society May, 1920.

Pathological report by Dr. Nadeau. The specimen is that of a large tumor of the kidney removed from a two-year-old child. The entire mass is 15 x 12 cm. in diameter; weighs 925 grams; is covered by a rather smooth capsule appearing membrane and is roughly lobulated.

The tumor consists of two definite masses, the smaller at the upper pole which is 5 x 7 cm. in diameter and consists of kidney tissue, and the other much larger mass in the lower pole 11 x 10 cm. in diameter.

There is a well-defined capsule about the tumor in the lower pole excepting at one point near the hilum of the kidney where the capsule is broken through by a papillomatous sanguinous and partially degenerated mass.

On cut section the tumor is found to be moderately soft, but at the same time giving definite resistance to the knife suggestive of fibrous tissue. The cut surface is pinkish-gray in color and there are seen gyrating whirls of white fibrous-like bands.

The kidney and tumor are definitely separated by a well-defined capsule.

Microscopic examination: The true renal tissue shows but few changes excepting that of moderate pressure atrophy. A section of the tumor reveals masses of mixed sized round cells in the spaces surrounded by a capsule-like formation of fibro-blasts. The round cells infiltrate all of the tissues and in some areas there is marked degeneration.

Pathological diagnosis: Round cell sarcoma of the inferior pole of the kidney.



Fig. 1. Kidney with Round Cell Sarcoma

The analysis of the case under discussion produces quite a few interesting points.

In former times it was believed and taught

that sarcomata of the kidney occur only as metastatic formations. This statement originating with Virchow was accepted under the weight of his authority. Later on by the strength of evidence in numerous postmortems it was shown that sarcomata of the kidney quite frequently are primary neoplasms of this organ. According to the prevalence of these formations they were designated as spindle or round cell sarcomata. Microscopically the tumor mass presents itself on cross cuts as a medullary soft substance that protrudes readily out of the surface of the cut. Under the microscope it is seen that in these simple forms, as a rule, the immediate vicinity of the canaliculi uriniferi furnish the starting points of the neoplastic formation.

The renal parenchyma may remain intact and may be easily differentiated from the growth. In other cases we find a prevalence of vascular structures and, therefore, these tumors are called angiosarcomata.

These tumors form a connecting link with those sarcomata that originate in the endothelium of the blood vessels or lymphatics, the endotheliomata.

Occasionally the renal sarcomata appear as mixed tumors; one encounters besides the sarcomatous structure, cartilage, smooth and striped muscle fibres, lyosarcomata.

In certain sarcomata, acinous formations are to be observed, reminding one of carcinoma.

Myosarcomata and adenosarcomata are usually counted among the so-called embryonic glandular tumors of the kidney. In practically all these cases there is a strict differentiation of the renal parenchyma from the tumor mass.

This species of neoplasm is, as a rule, observed only in infants. They are characterized by rapid growth and develop quickly into enormous tumors.

In these rapid-growing tumors quite often foci of softening and the formation of cavities is observed, hemorrhages into these cavities are a common occurrence. On account of the retrogressive changes on the surface of these tumors perirenal attachments develop quite extensively.

The kidney that is the carrier of such a growth suffers in its function by compression, and in consequence the other kidney will soon develop a status of compensatory hyperemia and hypertrophy. If once the neoplasm ulcerates and per-

forates into the renal pelvis amyloid degeneration of the other kidney is a regular occurrence.

The symptomatology of these tumors is characterized by four leading points, the appearance of a swelling that is determined by visible changes in the formation of the flank and by palpation, by hematuria, by pains originating in the swelling and by deterioration of the general condition.

Visible changes in the contour of the flank become evident only when the tumor has reached a certain size, while the palpatory findings may be elicited even in tumors of moderate diameter; this palpation is easy in children and is facilitated in adults, if they are examined in a warm bath, which leads to relaxation of the muscular covering. Hematuria may occur occasionally only, or the urine may be constantly stained. Quite often hematuria will be observed, before it is possible to palpate any tumefaction.

Cachexia always develops in the final stages, or will appear early in rapidly growing tumors. Severe cachexia may be observed, though no metastases are to be found.

Pains, while almost a regular accompaniment of the tumors in adults, may be entirely absent and really are in the majority of cases in infants.

In the very large tumors additional symptoms may arise, due to the dislocation and compression of the adjacent organs. The heart action and the functions of the intestinal tract are quite often impaired to a distressing degree. Interference with the deep circulation leads to the development of numerous large veins running through the skin covering the region of the tumor.

As far as the therapy is concerned, the operative removal of these tumors seems to be the only rational way of disposing of them, provided there are no serious contra-indications against any surgical interference. As such may be mentioned very advanced cachexia or the evidence of metastases in other organs.

The mere size of the tumor is no positive contraindication, because tumors of enormous dimensions were successfully operated on.

In order to attempt to prevent or at least retard recurrences post-operative radiotherapy of an intense character has to be instituted very soon after operation.

It may be considered, however, whether it would not be of advantage to use therapeutic

rays for some time previous to the surgical interference. It is a matter of experience that sarcomata are, as a rule, more amenable to the therapeutic influence of rays than other tumors and it may also be possible to destroy stray tumor elements before operation. Finally there are cases on record in which radiotherapy administered previously to the operation succeeded in considerably diminishing the size of the tumor, thus facilitating the eventual operative removal of the growth.

A PLEA FOR THE EARLY RECOGNITION OF RENAL TUBERCULOSIS.*

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CHICAGO.

I have had occasion¹ during the last six years to discuss the subject of renal tuberculosis in all of its phases.

Personal contact with a relatively large number of cases since my first paper was written has impressed me with the necessity of removal of the first involved kidney at a comparatively early stage if we wish to improve our percentage of complete recoveries.

The latter has already reached 60 to 75 per cent., according to various statistics (see table), but I fail to see any reason why this relatively high percentage cannot be still further increased if the diagnosis is made at an earlier period in the development of the disease.

Author—	Number of Cases	Early Mortality	Late Mortality	Percentage of Recoveries	Percentage of Recoveries (Incomplete)
Legueu ²	1,539	5.9%	15.4%	...	...
Israel ²	1,023	12.9%	14.2%	63.8	9.1
Kummell ²	106	4.0%	29.0%	65.7	...
Zuckerkindl ²	104	7.7%	13.0%	...	...
Wildbolz ²	139	2.8%	14.0%	59.0	...
Braasch ²	435	13.2%	10.8%	60.0	20.0
Suter	60	1.6%	6.6%	56.0	...
Lower and Shupe	45	.....	.....	60.0	...
Crabtree and Cabot....	79	3.8%	.....	...	...
(103 cases)					

1. Interst. Med. J. XX, 299, 1913; Idem. XXI, 764, 1914; J. Okla. ed. Assn., XI, 114 and 150, 1918; Ill. Med. J., XXXIV, 71, 1918; Surg. Clin., Chicago, IV, 401, 1920.

2. The statistics of Legueu and Israel are collective, i.e., from a number of different authors. The statistics of Braasch are based upon 435 cases operated at the Mayo Clinic (see Am. J. Med. Sci., 149, 8, Jan., 1919). The statistics of Lower and Shupe are from 45 cases which could be followed up and had been operated by Crile, Bunts and Lower. The statistics of Crabtree and Cabot are based upon 70 cases which could be followed up, operated since 1912 at the Massachusetts General Hospital. The statistics of Kummell, Zuckerkindl, Wildbolz and Suter are based upon their personal cases.

The operative mortality is so low that it is a

*Read at the seventieth annual meeting of the Illinois State Medical Society at Rockford, Ill., May 18, 1920.

practically negligible factor. By early mortality is generally understood the deaths which occur within the first year after operation. Under the head of late mortality are included all deaths occurring after the first year.

The most frequent causes of the early mortality are pulmonary tuberculosis and an involvement (tuberculous) of the opposite kidney. A chronic or healed form of pulmonary tuberculosis is a quite common complication of renal tuberculosis as Braasch has shown. It does not have an unfavorable influence on the prognosis, whereas an active process does. No doubt the majority of cases of death due to pulmonary tuberculosis following nephrectomy are due to the lighting up of some latent focus. The most common causes of the late mortality are pulmonary tuberculosis and tuberculous and nontuberculous disease of the opposite kidney.

By complete recoveries we understand a disappearance of all urinary symptoms, and absence of tubercle bacilli in the urine and a practically normal appearance of the bladder mucosa. Incomplete recovery is the term applied to those cases in which there is a persistence of vesical symptoms with or without the presence of tubercle bacilli. Some of the cases of incomplete recovery present tuberculous lesions in the epididymis, prostate and seminal vesicles. No doubt in many of these cases there were coincident foci in the kidney and epididymis. I have recently directed attention to the necessity of routine¹ examination of the genitalia in the male in cases of renal tuberculosis. Braasch in his recent paper² found that tuberculosis of the genitalia was present in 73 per cent. of 234 male patients. He also found that the mortality was twice as great when the bladder was involved to an advanced degree as when only a moderate involvement was present. In a similar manner the mortality in the cases where there was an extensive involvement of the kidney was far greater than in the early stages, with only slight lesions.

The presence of bone or glandular foci have little or no bearing on the prognosis. We thus see that it is possible to reduce both the immediate and late mortality and to increase the percentage of cases of complete recovery by making an early diagnosis with removal of the affected kidney. The latter procedure offers a far

greater percentage of permanent recovery than nonoperative treatment. The largest statistics in regard to the possibility of recovery by following a nonoperative method of treatment are those of Wildbolz. He directed an inquiry amongst the physicians of Switzerland and found that of 316 patients not operated upon 31.3 per cent died within the first two years of the disease, 27.2 per cent within three to five years. More than half of the patients—58 per cent—died within the first five years, and only 20 per cent were alive after five years. When we compare these statistics with those shown in the table approximating recovery in 80 per cent and complete cure in about 60 per cent, one must grant the great advantage of *operative over nonoperative treatment*. There is no authentic case on record of a complete recovery as a result of medical treatment. The condition known as autonephrectomy in which the entire kidney tissue has been destroyed is not a cure. The presence of such a kidney is a menace because of the dangers of miliary tuberculosis and of a toxic action on the opposite kidney. It is true that periods of complete amelioration of symptoms occur from time to time in renal tuberculosis and are very deceptive. Even in the occluded form one scarcely finds any bladder changes, thus leading one to believe that the patient has fully recovered. There are no subjective symptoms which are characteristic of renal tuberculosis. Even the objective findings so closely resemble those of other bladder and renal conditions that a diagnosis in the early stages is only possible if a complete urological study of the case has been made. The suspicion of the practitioner as to the possibility of renal tuberculosis being the underlying cause of obscure symptoms referable to the urinary tract, should always be aroused when a cystitis does not improve under the treatment usually given for that condition or when it is made worse by irrigation, etc. The clinical pictures under which renal tuberculosis presents itself vary greatly. In the majority of cases the symptoms of a cystitis predominate. An increased desire to urinate, at first nocturnal, then diurnal, is soon accompanied by pain during the act of urination and by the passage of blood especially toward the end of the act. In a second group a dull, aching pain over the affected kidney or

1. Surgical Clinics of Chicago, 1920, IV, 401.

2. Am. J. Med. Sci., CLIX, 8, Jan., 1920.

the occurrence of colics due to the passage of caseous debris or of blood clots stand out most prominently. In a third group more or less hematuria ushers in the clinical manifestations of the disease. In a fourth group symptoms such as one usually ascribes to a nontuberculous affection of the kidney appear. Chills, fever and pain over the affected kidney are the most striking features and many of the cases are mistaken for an ordinary pyrogenic infection. In a fifth class are included the so-called silent cases. The chief symptoms are a loss in weight and strength accompanied at times by an enlargement of the affected kidney. I think you will grant that there is nothing specific about any of these clinical pictures under which tuberculosis appears, hence we have become dependent upon the more exact methods of diagnosis of diseases of the urinary tract upon which modern urology is founded, viz.: cystoscopy, ureteral catheterization, radiography and pyelography aided by the microscopic and bacteriologic study of the urine obtained from each kidney. In the early period unless the infection is a very virulent one the cystoscopic picture does not differ greatly from that of a nontuberculous infection. The ureteral orifice is red and edematous just as it is in a pyrogenic infection and it is only by bearing in mind that a renal tuberculosis may masquerade under the clinical picture of a nontuberculous infection that an early diagnosis can be made. I desire to emphasize the necessity of staining the sediment obtained by ureteral catheterization for tubercle bacilli in every case of renal infection which does not clear up when all contributory causes such as strictures, calculi, etc., have been eliminated. I have found the Crabtree method very successful and much more dependable than guinea pig tests. In some cases the presence of a rigid, gaping ureteral orifice should lead to the suspicion of a unilateral renal tuberculosis, especially when there is evidence of a localized systitis confined to the vicinity of this ureteral orifice or the corresponding half of the bladder. In the slightly more advanced cases the diagnosis is rendered far easier through the presence of small, grayish nodules surrounded by an inflammatory zone or minute ulcers due to the breaking down of these nodules or tubercles. These tubercles and ulcers are often arranged in groups around the ureteral orifice

with normal mucous membrane between. I have found not infrequently that ulcerations are to be seen at the vertex of the bladder at a comparatively early stage and hence we do not fail to inspect this area as a matter of routine. There is absolutely no danger in catheterizing the ureter of the nontuberculous kidney. The urine which has been obtained from both sides should be centrifugalized for two hours in a high power biological centrifuge and the sediment carefully stained and examined for both pyogenic organisms and tubercle bacilli (Crabtree method).

The bladder changes in advanced cases present no difficulty in recognition to the experienced observer. The occurrence of extensive ulcerations and areas of granulation tissue are familiar to all. Radiography of the kidney has been of considerable assistance in the recognition of the more advanced cases and the same is true of pyelography, but one cannot hope to reduce either the mortality or the percentage of incomplete recoveries if we wait until these advanced changes are found. The object of the present paper is to make a plea for the careful urologic study of every case of obstinate bladder or renal infection in the hope that many cases will be recognized at period in the disease when complete recovery is possible.

DISCUSSION

Dr. Lespinasse (Chicago): The subject of diagnosis of tuberculosis of the kidney is one that is of importance to the individual only in the early stages. In the early stage, it is hard to diagnose, and there are a few points, one point in particular, that Dr. Eisendrath did not mention that will help us to make this diagnosis. Obviously, we can't run all our patients that come to us for slight urinary irritability through all the necessary examinations, but we can do this—the vast majority of the simple tuberculosis of the kidney will have sterile urine other than the tubercle bacillus. The types of cases that he showed there complicated by cocci and pyogenic organisms are relatively rare, so that if you have a patient whose urinary examination is negative, cystoscopic examination of the bladder shows nothing, maybe slightly reddened trigone—if you culture that urine and obtain growths, the chances are that that is not a tuberculosis. If you obtain no growth, the chances are that it is, and that case particularly should be subjected to all of the modern time-consuming and technical examinations to work out the diagnosis as he has shown.

When your result is negative or doubtful, then you must wait for your microscopic examination of your urine. If that is negative, then the last point, and to my mind one of the very important points, is the infection or inoculation of the guinea pig. That will

often succeed when your microscopic examination for tubercle bacilli does not succeed. But the chief point in the diagnosis, as he said, is that you must suspect tuberculosis. We never diagnose a case unless we are thinking about the disease, and tuberculosis of the kidney is one of the commonest of urinary conditions, and it is also one of the most occult and obscure in early stages when medical measures have considerable value.

A NEGLECTED FORM OF CERVICAL ENDOMETRITIS.*

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The diagnosis and treatment of chronic endometritis as it affects the middle and lower portions of the cervix have been well described in our literature. But the same can hardly be said of inflammation at or contiguous to the internal os. Dilation, eversion, erosion and cystic degeneration do not take place at the upper the same as at the lower end of the cervix. The internal os dilates only slightly, its lumen is crowded with swollen and obstructed glands and the circulation is interfered with at first by the pressure from within, and later from without, by a contracting band of inflammatory exudate. On account of such interference resolution does not take place to the same extent as below and a ring of imperfectly organized connective tissue remains whose upper edge is at or just above the os and whose lower edge merges into the somewhat thickened mucous membrane below it. In multiparae this band or constriction ring does not necessarily interfere with uterine drainage, but in nulliparae it usually takes on some of the characteristics of stenosis. The presence of this constriction ring is ordinarily overlooked by the practitioner who thinks in terms of tampons and sometimes by the gynecologist whose scientific lenses are focused for operations. The reason is that neither one is looking for it, and do not avail themselves of an intelligent use of the uterine sound. When the sound passes through the ring without resistance the condition is not suspected; when it encounters resistance the difficulty is attributed to faulty development or antelexion, and the dilatation intended for the relief of the supposed defect sometimes relieves most of the symptoms for a short time and the patient is pronounced cured of what she did not have. But the symptoms either return in a short

time or the original condition persists in a slightly ameliorated form.

The diagnosis, made by means of the sound, is confirmed by the results of the treatment, viz., by the disappearance of the physical signs, and the relief of subjective symptoms such as backache, headache, reflex stomach disturbances, malaise, dysmenorrhea, menorrhagia, intermenstrual pain and sterility. The number and severity of the symptoms vary greatly in different cases, depending in part upon the interference with the patency of the lumen, the chronicity and the associated pelvic conditions, and partly upon the patient's general resisting powers and nervous habits. Some patients do not complain of many symptoms, yet I think that chronic inflammation in this location produces more subjective symptoms than in any other part of the uterus. Its symptoms are often attributed to a corporeal endometritis when such does not exist.

In all cases of chronic cervical endometritis or supposed corporeal endometritis, we should search for induration about the internal os. The first and most noticeable sign in all but the most chronic cases is pain produced by a slight pressure of the sound. When the os is anatomically small or is flattened by flexion, the pressure is not painful until it causes some dilatation or straitening, or at least until firm pressure is made. When the sound is passed through the inflammatory constriction with slight pressure its withdrawal is followed by a show of blood at the external os or by a stain of blood on the sound. In stenosis or under-development not due to or connected with inflammation it requires not only firm pressure but some forcible dilatation to produce a show of blood. That the tenderness is primarily at the internal os and not due to a general intra-uterine tenderness is known by the cessation of the pain almost as soon as the bulbous end of the sound has passed the internal os, even though the sound be manipulated so as to impinge gently against the uterine walls above. When the constriction ring is so large that it does not interfere with the passage of the sound, a little gentle manipulation can be made to locate the tender area at the internal os. The constriction ring seldom produces an abrupt and decided projection on the surface and the sound may merely feel as if it slipped over the edge of the thickened mucous membrane into the somewhat

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more spacious uterine cavity above. When the ordinary uterine sound thus passes without encountering resistance, a series of graded sounds that taper slightly at the end are required both for diagnosis and treatment. In passing such a sound large enough to dilate slightly we produce the diagnostic pain and show of blood already mentioned. In very chronic cases moderate pressure may not produce the show of blood, but in its place a lump of inspissated mucus, expressed from the glands, may be found adherent to the sound.

The ring of exudate can, in some cases, be traced by the uterine sound around the entire circumference; in others a part of the circumference will have no ridge, but be flat, smooth and of a cicatricial hardness, indicating a partial or complete local destruction of the mucosa. I have recently had a case of bilateral deep laceration of the cervix in which by separating the labia I could see the smooth red, cicatricial flat surface posteriorly and the elevated ridge anteriorly. Both had been already recognized by means of the sound. The lateral lacerations were quite deep and I suppose that the flat cicatricial surface represented the site of one or more superficial lacerations at the internal os which had not united.

In two of my cases the slight dilatation produced by the passage of the uterine sound caused the patients to faint when they got off the examining table. In several cases the patients have turned pale and dizzy, and have had to lie down or take a drink of ice water or go to an open window to avoid syncope. This would probably have occurred oftener, but for the fact that many of them remained on the examining table long enough for the effect of the local irritation produced by the examination to wear off. This symptom, I believe, is produced more often in cases with old well-organized exudates. I have known painful dilation of a small comparatively healthy cervix to cause nausea and a feeling of faintness, but it came on during dilatation, and passed off quickly and never caused the patient to feel like fainting after she stood up. It has occurred to me that the occasional cures of vomiting in pregnancy by dilatation of the cervix that have been reported, might have been in cases in which such an exudate at the internal os had kept up a reflex irritation.

The treatment calls first of all for dilatation. Stimulating applications before any dilatation has been effected are not always borne well and sometimes aggravate the condition. My experience has led me to prefer gradual progressive dilatation to extreme divulsion at one sitting. The latter is apt to produce one or more lacerations that extend through the constriction ring so that farther dilatation separates the lacerated edges of the ring without having much effect upon the exudate. Subsequent contraction takes place, requiring one or more subsequent divulsions, unless it is kept from contracting by the periodic passage of sounds the same as for progressive dilatation. The repeated mild stimulation of progressive dilatation with graded round dilators not only causes a steady improvement, but it more often cures the sterility which is the result of the inflammatory exudate rather than of mechanical obstruction.

When the patient cannot or will not stand the pain of progressive dilatation, I make the first one or two under the influence of nitrous oxide gas. However, I do not carry these dilatations far enough to cause lacerations and depend as much as possible upon the subsequent *periodic* use of the round dilators. A very slight increase in the amount of dilation at each sitting is all that is necessary. I dilate twice a week in such cases; once a week in those who can endure more at a time.

Before dilating, I swab out the vaginal vaults and cervix thoroughly with a 5 per cent solution of phenol; afterwards I apply a 20 per cent solution of phenol in glycerine to the entire uterine cavity. When a round dilator equal in size to a No. 25 urethral dilator, French scale, can be passed without causing a show of blood or producing much pain I apply a stimulating solution of iodized phenol to the entire cervical cavity and dilate twice a month for a few times and then once a month until I am satisfied that the parts are in a fairly healthy condition. In cases with a large lumen I use the same treatment except that I begin and end with larger dilators.

I think that the occasional failure of an Emmet or Schroeder trachelorrhaphy to relieve symptoms is often due to the presence of this constriction ring about the internal os. The dilatation which is often done as a preliminary step for the purpose of uterine treatment or disinfection may

afford temporary relief, but some of the symptoms usually return and may make the trachelorrhaphy seem a failure to the patient. In the first few cases of returning symptoms after trachelorrhaphy that came to my notice I supposed that the external os had been closed up too tight. But the external os must usually be very small and unusually rigid before it will give rise to subjective symptoms of any importance.

I am inclined to believe that the infections due to the use of dilating tents have usually been partly due to laceration of this constriction ring. I also believe that there is great danger of starting an infection by office dilatations unless facilities for disinfection and an aseptic technic are available, and are faithfully carried out; the more so if the abrasions or minute lacerations of the mucosa are not given time for repair between treatments. When the dilatations produce a considerable show of blood I usually wait a week for the abrasions or superficial lacerations to heal, although they can safely be made every three or four days if dilatations are slight and a perfect antiseptic and aseptic technic is carried out.

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THE INFLUENCE OF THE MIND UPON THE BODY: ITS LIMITATIONS AND MODUS OPERANDI.*

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To those who have hitherto written on the important problem of "The Influence of the Mind Upon the Body," I wish here to pay my tribute. But no attempt will be made to review the literature of this subject because much of it is so confusing and the discussion of the individual views of the different students would lead us so far astray that you would have neither the time nor the patience to listen to my own final conclusions or views.

I shall proceed forthwith, therefore, with my presentation of the subject chosen for discussion.

CLASSIFICATION OF ACTIVITIES IN THE HUMAN ORGANISM

For the purposes of this paper, the levels or types of activity found in the human organism may be conveniently classified as given below, in descending order so far as their lateness of appearance or of acquirement in evolution (ontog-

eny) and development (phylogeny) is concerned. (See chart.)

1. *Highest* of all we have *consciousness* or *awareness*. Consciousness may be (a) active, critical, selective, or (b) passive, uncritical, on-looking. It may have as its object or within its focus any of the following phenomena: an idea, an image, a sensation, a perception, an hallucination, an emotion, locomotor bodily activities, or vegetative bodily activities (see later).

2. Next below in the scale or series come *ideas*, under which term, in the remainder of this paper, we shall include images.

3. *Emotions* find their place below this, but, as will be explained later, no really new type of activity is present.

4. *Spontaneous*, ordinarily called *voluntary motor activity*, comes next. This last mentioned group comprises such movements as those of the extremities, the trunk, the head and neck, the face, the tongue, swallowing, speech, etc. This is variously termed the voluntary, locomotor or projicient system. In addition to the motor aspect of this system one must consider the sensory portion, which we may classify separately as

5. *Sensation*, ordinary or special. Here are gathered together such sensations as heat, cold, touch, pressure, pain and the like, as well as vision, taste, smell and hearing.

6. *Vegetative*, ordinarily called *visceral activities*, make up the sixth group. This refers to the functioning of the viscera or internal, vital organs or systems, such as the cardiovascular-renal system, the alimentary system, and the rest. Of the activity of these we are unconscious or unaware in ordinary, daily, healthy life. It is especially when these systems function excessively or faultily—that is, when the normal activity is disturbed—that we become conscious or aware of their presence. These organs are supplied by the vagus or sympathetic nervous systems, often called the *vegetative*, *autonomic* or *involuntary* system. In this pigeon-hole we also include glandular activities, not excepting those of the ductless glands, although they themselves are but producers of specific chemical substances which are responsible for activities which rightfully belong to the next group—chemical activities.

7. *Chemical* or *metabolic activities* hold the lowest, but by no means the least important, rung

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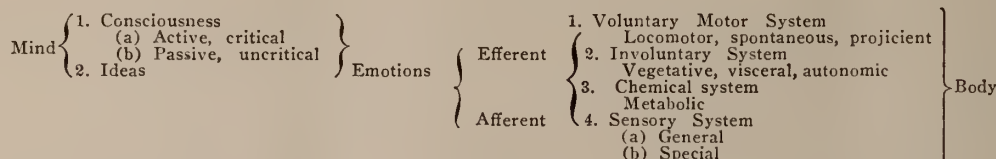
in the ladder. These chemical changes take place under the name of metabolism, with its two phases, anabolism and katabolism. These activities take place in the individual systems, organs, structures, tissues and cells as a part of the life processes.

Use of terms "Mind" and "Body" as employed in this paper. As used in this paper the term "mind" shall refer to the first two groups—"consciousness" and "ideas," and partly to the third group—"emotions"; for, in the latter, we have combined together activities of the "mind" and of the "body" as these terms are used in this paper and as will be explained below.

By the term "body" I shall refer to the last four groups—spontaneous, sensory, vegetative and chemical activities, and in part also to "emo-

of the human organism, from consciousness to chemical activities. For example, irregular habits or overwork due to vaulting, excessive or uncontrolled ambition, or to unhygienic living may lead to most profound bodily changes of all sorts. One's habitual facial expression ultimately depends, in some measure, upon the habitual or most common thoughts and emotions of one's daily life. Worry may lead to insomnia with its dire results—headache, dizziness, asthenia, poor appetite, loss of weight, tremors, alimentary, cardiovascular-renal symptoms, etc. Neglect of oral hygiene may lead to arthritis, which in such cases is due remotely to a habit, which is dependent upon training, imitation, suggestion, ideas. For this reason, the healthy or unhealthy condition of the separate cells, tissues, structures, organs

CHART



Explanation: Under "MIND" include "CONSCIOUSNESS," "INVOLUNTARY," "CHEMICAL," and "SENSORY" activities. Under "BODY" include "VOLUNTARY" activities. In so-called "EMOTIONS" we have activities at all levels.

tions" in which both "mental" and "bodily" activities are joined.

Influence of consciousness. The activities of the first group, or the influence of consciousness or awareness, whether active (critical, selective) or passive (uncritical, onlooking), I shall dismiss at once with the simple statement that its possible influence upon the body cannot be greater than and, in fact, depends upon the power or influence of ideas and emotions, for even in its most active form it can but exert its influence in controlling, guiding or directing, in varying degree, ideas or emotions.

We are free, then, to discuss the power of ideas and emotions over bodily (spontaneous, sensory, vegetative and chemical) processes or activities.

The influence is immediate or remote. The possibilities of remote influence. In speaking of the influence of the mind upon the body we must differentiate between (a) *immediate* and (b) *remote* influence or control.

We may agree at once that the remote influence of the mind upon the body is unlimited, and changes of the most pronounced, profound and complicated sort may be produced at every level

and systems, in fact, of the entire organism, may be dependent upon or due to the personal hygiene and behavior which latter, after all, are but the result of training and education which, in turn, can be reduced to instincts, emotions and ideas.

We shall grant, at once, that this circuitous, remote influence exists, and shall now dismiss this aspect of the problem from our presentation, which now reduces itself to the *immediate* influence of the mind (ideas and the "mental" part of emotions) upon the body (spontaneous, sensory, vegetative and chemical activities).

By psychotherapy, whether in the guise of faith cures or otherwise, some or all of the symptoms produced remotely or circuitously by ideas, habits, training, etc., may be alleviated, cured or prevented, in varying degree, dependent upon the particular case. This can be effected by re-education and the reformation of personal habits and hygiene.

Bodily changes during the act of thinking. The ideational or thinking process or act, a cortical affair, must be differentiated from the idea *per se*. Ideational activity is accompanied by bodily

activities of all sorts for, during thinking, a form of energy-expenditure or work, we assume and maintain certain definite bodily attitudes with simultaneous, accommodative changes in the supporting activities or functioning of the locomotor, sensory, vegetative and chemical systems.

The immediate power of ideas per se. I shall now consider the *immediate* influence of ordinary, simple, pure ideas upon the body. By the use of ideas in the form of imagination, dreams, hypnosis, suggestion, delusion, simulation, exaggeration, and the like, how far can one directly control, influence, induce or affect the bodily activities? This will tell us the immediate power of what is variously termed the will, will power, volition, etc. It will tell us the limitations, in so far as the *immediate* control of bodily activities is concerned, of the faith cures, the healing cults, and all forms of psychotherapy, scientific or unscientific, legitimate or illegitimate, medical (professional) or extra-medical (extra-professional).

Even after excluding the *remote* and confining our presentation to the *immediate* influence of ideas over bodily processes, we must distinguish between what we will call (a) *immediate, direct* and (b) *immediate, indirect* influence. An example of the direct power of an idea is the movement of any portion of an extremity. An example of indirect influence is the circulatory and other changes which accompany, support, supplement, are secondary to, depend upon and follow such voluntary acts of the locomotor system as lying down, sitting, standing, walking, running, talking.

Elsewhere I¹ have presented my conclusions in this matter. I can briefly summarize the extent and limitations of the immediate power, direct and indirect, of ideas over bodily states (activities), in numerical order, as follows:

1. Even in the limited group mentioned below, the *immediate, direct, transient* power of ideas over the locomotor, voluntary or projicient system, with its spontaneous movements, is decidedly limited, for, ".....the idea of a movement (or of any response whatever) is, in and of itself, unable to produce it," since ".....an idea does not tend to provoke the act which it is an idea of, but only that which it connects with as a result of the laws of instinct, exercise and effect."² In this way past experience, habit

formation and training play a predominant and determinant part, as in mechanical work, surgery, and related, similar activities.

2. Ideas can *immediately* and *directly* lead to *transient* functioning of the voluntary nervous system or what we have called the locomotor or projicient system. This occurs in ordinary voluntary activity which is, as a rule, performed more or less consciously and purposively, is transient in nature, and immediately and directly produces activity of the so-called voluntary or locomotor system.

3. The involuntary or vegetative system can be affected *only indirectly* as the result of ideas—by the intervention of the emotions or by changes which accompany the reaction in the locomotor system; for instance, when walking or talking, or moving the arm or leg, there are cardiovascular and other changes occurring as secondary, adaptive reactions. Salivary and gastric secretion of supposedly "psychic" origin may be exceptions to the rule (Pawlow, Cannon, Carlson and others). But this law seems to hold free for all other visceral activities.

4. Ideas cannot evoke, in *direct* manner, sensory phenomena. No sensation or percept can be directly recalled by the power of ideas, memory, will power, thinking, imagination, hypnosis, suggestion, delusion. Hallucinations are never produced in this fashion for, like percepts, they are always of peripheral origin. This means that by ideas we cannot reproduce or re-experience feelings or sensations of warmth, coldness, touch, pain, pressure, etc. Nor can we voluntarily resurrect by imagination, the taste or smell or sound or color, previously experienced. It is especially important to remember that pain, a form of sensation, is never and can never be imaginary or subjectively, ideationally induced. *Pains are always of peripheral origin, but centrally appreciated.*³ *There are no so-called subjective pains.*³

5. By ideas leading to distraction of attention one may inhibit or repress the degree of consciousness or awareness of sensations of all sorts—warmth, coldness, pain, touch, pressure and the rest.

6. Ideas, will power or whatever you prefer to call it, cannot lead, *immediately and directly*, to disorders of the locomotor or voluntary sys-

tem, of a prolonged and continuous nature, of the sort seen in what has been called and still is described by most writers and clinicians as "post-traumatic hysteria."⁴ This dogmatic statement, I know, is in opposition to views held by the foremost neurologists here and abroad, and described for years past and more recently in the great World War just come to an end (so-called shell shock or war neurosis of so-called hysterical type).

7. In the case of organic paralyses, the influence of ideas, will power, volition, wishes or desires, cannot directly lead to functioning of the individual voluntary muscles or muscle groups which have been organically paralyzed, but such influence is limited to the muscle power still present in the partially paralyzed muscles, but not developed to its utmost degree, and to the prevention of atrophy from disuse in the paralyzed parts. Whatever power still exists in the partially paralyzed muscles may be developed to its greatest possibility by training, exercise and various physical measures.

8. There is no possible ideational control, *immediately and directly*, over the involuntary muscles of the internal organs. There can be no immediate and direct voluntary control or modification, for instance, of the heart's action or rate. It is true that through the intervention of ideas the heart's rate may be modified immediately, but only indirectly, by adopting, it may be unawares, perhaps for a very brief period, certain attitudes or postures, which involve the voluntary, locomotor or projicient system first, as in ordinary voluntary activity and in the emotions, only to be accompanied *instantly* by certain changes of the involuntary or vegetative system—respiration, heart action, circulation, etc.

9. Ideas cannot *immediately and directly*, *transiently or permanently*, affect peripheral processes, sensory, secretory or motor, wholly under the domination of the involuntary (vegetative and chemical) systems.

10. Ideas can lead, *immediately, but only indirectly*, to *transient* functioning of the vegetative and chemical systems by first producing activity of the locomotor system, which is accompanied by simultaneous, adaptive changes or activities in the vegetative and chemical (involuntary) systems, or by first exciting the emotions (which amounts to the same thing, as will be explained later, when the emotions are discussed).

The conclusions just reviewed show clearly the baselessness for the claims made for the direct power of the "mind," "ideas," "will," "will power," "volition," "wish," "desire," "the unconscious," "the psyche," "the subjective mind," "the objective mind," "suggestion," "imagination," and their ilk, made by so many writers on "the faith cures" (Christian Science, New Thought movement, etc.), hypnotism, psychoanalysis, etc. It also shows the groundlessness for such widespread lay superstitions as the supposed causation of so-called "marking" or birth marks and deformities in the new-born by the mental states, impressions and thoughts of the mother during the period of gestation.

The power of emotions. In what we call emotions we may have reactions at various levels—ideational, locomotor, sensory, vegetative and chemical with, at the same time, a varying degree of consciousness, awareness or feeling of certain of these changes taking place. The degree and variety of these manifestations varies with the degree and variety of each individual emotional reaction.

Viewed in this light, therefore, the bodily changes in so-called emotions are not due to but are an integral part of the so-called emotions. In the emotions there are combined both mental and bodily reactions, in varying degree. But even in the case of these emotions, my views on the limitations of the power of ideas, as elaborated above, hold true. I hold—and it can be proved easily, as I shall do in a separate communication—that the difference between so-called emotions and ordinary voluntary activity, especially when the latter is pronounced and exaggerated, as in running, is in the motive or the mental state present at the moment. Otherwise the *modus operandi* is the same, and the reactions in the vegetative and chemical systems present in the emotions are produced *not directly, but indirectly* by the mental state, and accompany or are secondary to activity in the projicient system which precede them and which themselves are directly produced by the mental state. An analysis of the changes which take place in marked anger and a comparison thereof with the phenomena found to be present in boxing, fighting, running or competitive sport will show this to be entirely true. This is the theory of the nature and *modus operandi* of the emotions which

I accept and which, so far as I have learned up to date, is original with me.

In the so-called emotional states, it is plain, with its bodily states as components, we find bodily changes of all kinds.⁵ Besides mental accompaniments in motive, consciousness and ideas, we may find changes from the highest to the lowest levels in our makeup—locomotor, vegetative and chemical. The writings of Darwin, James, Shand, Pawlow and his followers, Cannon, Crile, and many prominent psychologists and psychopathologists, are replete with illustrations of this truism and need not and cannot be offered here as evidence.

Depressing emotions are disintegrating and stimulating emotions are integrating. Emotions may be exciting or soothing.

Emotional reactions are more pronounced in persons with irritable, impressionable, sensitive, relatively unstable nervous systems—the congenital or acquired neuropath or neurotic, especially if the neuropathy affects, for the most part, the involuntary or vegetative system.

In individuals with organic visceral disease—heart disease, pulmonary disorder, arterial hypertension, etc.—the diseased organ or system is disturbed more easily by emotionalism, just as it would be by any increased bodily activity, thus leading to overwork and added strain, the weak links (the diseased organ or system) in the chain of bodily activities being apt to give way first and in greatest degree.

Fatigue predisposes to emotionalism and excessive bodily reactivity (irritable weakness) to stimuli.

The value of good habits of living and of healthy, sound individual organs and systems is clear.

The mental state or mood, with its ideas and emotions, immediately and directly produces or is accompanied by bodily effects in attitude, posture, gait, spontaneous locomotor activity and the secondary adaptive responses in the vegetative and chemical systems.

The more disturbed or defective or irritable the locomotor, vegetative or chemical systems, whatever the cause or causes, the more easily and profoundly they are disturbed by ideas or in emotions, directly (the locomotor system) or indirectly (the vegetative and metabolic systems), and the more predisposed to impulsive ideation

and emotion is the human organism and the less easily controlled by the mind (consciousness, ideas and will power). There is thus a veritable vicious circle.

Emotion may directly aggravate, just as ordinary work would, already existing functional and organic disease of any organ.

At this point I must state that I do not believe in existence, because there is no sound physiologic footing for it, of ideogenetically produced, prolonged motor paralyses or sensory losses of so-called post-traumatic hysterical variety. Such functional conditions, not due to gross organic changes, are fatigue or exhaustion states, due to microscopic changes, with a psychogenic (ideational and emotional) element superimposed in most cases; or they can be traced to mere inaction with absence of real efforts to produce function in the involved parts, due to blind continuation of an original fatigue state which has since cleared up, but in spite of which the patient continues to act by misguided conviction as if the condition of fatigue or exhaustion was still present.

It is thus seen that in *emotions* there is no new type of human activity but merely a certain combination of the activities of consciousness, ideas, the projicient or locomotor system, the vegetative system, the sensory apparatus and the chemical system, with the *special* characteristic of a peculiar mental state which differentiates it from ordinary, non-emotional behavior.

Bodily causes of nervous instability. It needs no further argument to prove that the bodily state of health, physico-chemical and physiological, has much to do with our bodily reactions to situations in life.

Irritability, fatigue, impressionability or instability may be (a) *congenital*, from one or more of many causes, such as instability or neuropathy, general or localized, from parental, especially maternal syphilis, tuberculosis, malnutrition, etc.; or (b) *acquired*, which may be of several types, as follows: (1) *functional or physiological*, due to overwork, insufficient food or sleep, or the physiological epochs (puberty, menstruation, pregnancy, lactation, menopause, senium); (2) *organic nonnervous or extranervous disease*, such as tuberculosis, hyperthyroidism, arterial hypertension, nephritis; (3) *organic nervous disease*, such as cerebrospinal lues, mul-

tiple sclerosis, dementia precox, general paresis; (4) *drug and intoxication states*.

THE PRACTICAL IMPORT AND SUMMARY OF THE ABOVE CONCLUSIONS

1. This paper gives a working classification of the activities going on in the human organism.

2. The terms "mind" and "body" are used in this paper with definite clinical delimitations.

3. It gives the precise delimitation and the exact *modus operandi* of the influence of so-called mind on so-called body.

4. It combats and shows the error of the views of the various cults and faith cures, and the superstition, both lay and medical, as to the unlimited power of the mind over the body.

5. It explains the results actually obtainable and obtained by psychotherapy of whatever kind, besides giving the limits of its possibilities.

6. It differentiates between the power of ideas and the activities in emotions—*ideogenetic* and *emotiogenetic* phenomena.

7. It distinguishes between *immediate* and *remote* influences of the mind upon the body.

8. It differentiates between *immediate direct* and *immediate indirect* bodily influence of the mind.

9. It is apparent that the control of bodily activities is in the hands of each individual and demonstrates the need of such control, since the suppression of chance ideas leads to the suppression of unnecessary or harmful acts involving the locomotor system, and the accompanying secondary vegetative and chemical systems.

10. We have control, indirectly, by the control of ideas and emotions, over useless, wasteful activity of the voluntary or locomotor system and of the secondary vegetative and chemical phenomena.

11. This explains the true value, possibilities and therapeutic efficacy of all possible professional (intramedical) psychotherapy, of extra-professional "faith cures" and healing cults, of satisfying, self-sufficient, stoical philosophic attitudes or viewpoints, of religion and prayer, of attaining, by whatever means, nervous and mental poise, calm, quiet, equanimity, equilibrium.

12. Aside from the attainment of a mood of well-being and mental calm, obliterating unnecessary, depressing, inhibiting, destructive emotions (such as fear and its allies), and permitting a joyful, hopeful, forward-looking, life-loving,

constructive policy or outlook or *Weltanschauung*—aside from this, the value of such mental states is both physical and mental; for they (a) *directly and immediately* lessen the drain on consciousness, ideation and the locomotor system activities; they (b) *indirectly but simultaneously and immediately*, through control of the locomotor system, lessen the drain on the vegetative and chemical systems; and they (c) *indirectly and remotely but not immediately* overcome the tendency to emotionalism, bad habits, and the evil results from prolonged continuation of such unhealthy habits of living.

13. All this means the conservation of human energy, and the ability to do more work and suffer less fatigue.

14. Finally, one can understand how symptoms referable to any of the levels mentioned in this paper—mental (consciousness, ideas or bodily (locomotor, vegetative, chemical)—directly or indirectly, immediately or remotely, whether wholly or in part, due to or aggravated by emotions and ideas or, in other words, dependent upon the thinking of the individual, may be cured, minimized or prevented, varying in each special case, by such methods as above mentioned.

15. But the *modus operandi* or the mechanics is not mysterious or mystical, but is based on definite physiological processes or laws, as explained in this communication.

16. And the limitations to functional conditions and its non-applicability to organic conditions (really gross destructive processes such as occur in injuries, inflammations, etc.) must be sharply drawn.

Every physician should aspire to diagnose and differentiate clinically, anatomically, pathologically and etiologically, between organic and functional conditions at all levels of activity in the human organism, tracing the course or origin to its ultimate or primary genesis.

This is difficult enough for the best physicians and even groups of physicians (so-called "team-work") to do. And if this be true of trained physicians, with all their special experience and study, then surely no layman, no one not a physician can hope to or should be permitted to diagnose and treat ailments of any sort. Special kinds of treatment (massage, hydrotherapy, etc.) recommended by the physician, may be carried

out by laymen who have been trained in those particular fields. But this should be under the supervision of the physician.

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THE VON PIRQUET FEEDING SYSTEM*

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The war with all its hardships has brought home to the starving population in Europe the problem of how best to get along on the smallest amount of food possible. In order to do that, it was necessary to find out what food element could be done away with, or, at least, minimized. It was also necessary to find out what is the minimum requirement of the necessary food elements. The problem was most acute in regard to children, many of whom were left fatherless. The question arose, "How could nutrition be put on such a basis that life could be sustained by the least amount of food; and, secondly, how could this knowledge after it is obtained be imparted to the general practitioner, and in turn to the public? In answer to the two most important problems, Pirquet and his assistants devised a system of nutrition, aimed to be simple and yet accurate.

The system of feeding by calories, first brought forth by Heubner and Rubner, and later accepted by European and many American pediatricians, presented certain difficulties. Schick rightly points out that it is difficult to popularize the value of calories for practical feeding. The difficulty lies in the conception of calories. The presentation of the physical conception of the degree of heat necessary to raise 1 liter of water from 0 to 1 degree of heat is too abstract, to which is added the perplexity of differentiating between the larger and smaller calories.

The conception of calories is vague in the minds of many physicians, particularly those

that are not especially interested in problems of nutrition. In the following discussion we shall make no attempt to discuss critically the pros and cons of the new Pirquet system of feeding. We will only endeavor to give an expose of the system, which we believe is the latest word in infant and adult feeding, and let the reader form his own opinion in the matter. We shall follow the work of Pirquet from his monograph and also the article of Schick in the *Ergebnisse* (1918), making most use of the latter work because of its more compact and concise form.

The main supports of the Pirquet system are:

1st: In the place of calories he uses an easily understood physiological measure—milk.

2nd: The determination of the daily quantity of food necessary which is done by means of simple mathematical calculations dependent on the height of the individual in sitting posture.

Von Pirquet compares all nutritional foods to Mother's milk which, as is well known, has the following composition:

Protein	1.7%
Fat	3.7%
Sugar	6.7%

The standard Mother's milk has a physiological burning value of 667 large calories (in the body, not in the calorimeter).

The value of 1 Gm. Mother's milk is taken as the nutritional unit, each unit having 0.67 large calories, and the abbreviation (Nahrungs Einheit Milch) (Nutritional Unit Milk) or *N.* is used to indicate this unit.

This measure can be expressed in larger and smaller quantities.

0.001	N—1	Millinem	—1	NW
0.01	N'—1	Centinem	—1	CN
0.1	N—1	Decinem	—1	DN
10	N—1	deKanem	—1	DKN
100	N—1	Haktonem	—1	Hn
1000	N—1	Tonnemen	—1	Tn

One can use the Latin words *Nutritionis Elementum* for *N E M.* or *N.* For general purposes Mother's milk and cow's milk have equal value.

The objection will be made, and in fact, has been made, that the *N.* value of foods is in reality nothing more than the caloric value, and that it is superfluous to substitute new values for calories.

Setting aside the previously mentioned in-

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definiteness and confusion that the idea of calories produces on the minds of some authors and the laity when used in foods, the advantage in using *N.* values lies in the elastic comprehensive conception of food that everyone without any difficulty can grasp when he compares food with milk values.

Here is an example:

We are going to give a 7 months old child a meal of farina equal to a meal of Mother's milk.

130 G. milk.

8 G. farina. This quantity to be boiled down to 100 G.

5 G. sugar.

The following shows the value of same:

130 G. milk	130 N.
8 G. farina	40 N.
5 G. sugar	40 N.
a 6 N.	

200 N.

We find in this 100 G. mixture we have as many *N.*'s as in 200 G. milk, 1 G. farina gruel—*N. N.* This is called the double *N.* Now if I wish to replace a given quantity of milk with an equal quantity of farina gruel of the same *N.* value as the milk, I would take one-half of the above preparation. This is, of course, a more consistent mixture, thicker, and leads the way to giving a thicker food and a food that contains the same *N.* values to one-half the quantity of fluids.

As to the food elements required, Pirquet finds there is no minimum fat requirement for an individual. He fed infants skimmed milk with the addition of sugar and the infants did well. Protein is inevitable to human existence, but may be put at a minimum; at least, at a lower amount than suggested by Voit. Mother's milk contains 1.7 per cent protein; that is, in 100 grams or *N.* of Mother's milk we only have 1.7 GM of protein or 10 *N.*, as each GM of albumen = 6 *N.*, so $1.7 \times 6 = 10.2$.

This shows that the minimum is 10 per cent of protein. The maximum will be 20 per cent.

The second important point is the daily food requirements of the organism. There is the minimum, maximum and optimum requirements.

By minimum we understand that quantity of food that is necessary to replace the material used by the inner workings of the organism. The

most important objectives are the workings of the muscles of the heart, the respiratory apparatus and the workings of the glands. Naturally all the organs are actively at work. This

TABLE OF N. VALUE OF FOODS			
"N" in 1 Grm. Rnd. Vals.	When Bought	Prepared in Kitchen	Hek-tonen in Grm.
13 3	Tallow, O.*; hogs fat, O.*		7.5
12.	Butter, ol. margarine, O.*		8.5
11.	Bone, marrow, 5.		9.
10.	Bacon, H.		10.
9.	Kernel of nuts H.		11.
8.	Sweet almonds, 1.		12.5
6.7	Fried skin of fowl, fat sausages, powdered full milk.		15.0
6.	Sugar, "O." powd. cacao, 1; chocolate, 0.		17.0
5.	Ham, 3; smoked meat, 3; fresh meat fat, 2; lean cheese, 4; fat cheese, 3; condensed milk with sugar, 1; leguminous plants, flour, 2; grain flour, 1; zwieback, 1; rice, 1; starch flour, 0; honey, 0; syrup, 0; skimmed milk, 4; dried shell fish, 7.	Fat flour foods...	20.
4.	Fish eggs, 4; blood sausages, 1; dried leguminous foods, fine wheat bread, 1; dried dates, H.		25.
3.3	Condensed milk without sugar, 2; mixed bread, 1; dried vegetables, H. to 3; dried mushrooms, 3.	Marmalade, 3....	30.
2.5	Fresh meat medium fat, 4; fresh fish fat, 4; eggs, 3; prepared meats 6; chestnut, 1; curds, 6.		40.
3.	Rye bread, 1; sardines, 5; sprats, 4	Light flour foods.	33.
2.	Fresh meats, lean, 6; fresh liver, kidney, 5; bries, 7.	Double N food, farina gruel, prepared vegetables, leguminous food, 2; spinach, 1; kohl, H; sour kraut, H; rice, H.	50.
1.5	Calfs brains, 3; fresh herring, 7; prepared fish, 1.		
1.25	Lungs, blood, 7; fresh fish, lean, 7; potatoes, H.; shell fish, fresh, 7.		80.
1.	Mother's milk, 1; cow's milk, 2; green peas, 2; grapes, H.; sugar beets, H.; bananas, H.; figs, H.	Equal foods. Prepared vegetables — potatoes, H.; milk foods, 1; thick soups, 1.	100
0.67	Fresh fruit, H.; fruit juices, 0; celery, 1.		150.
0.5	Skimmed milk, 4; cut beans, carrots, 1; fresh onions, 1.	Half food Thin soups	200.
0.4	Fresh spinach, 3; soup greens, 1; kohl, cauliflower, 2; turnips, 1; fresh mushrooms, 3.		250.
0.33	Sour kraut.		300.
0.25	Asparagus, 1; tomatoes, 1.		400.
0.2	Lettuce, 1; cucumbers, 2.		500.
0.1		Meat broth.....	1000

*O means no protein. H means ½ protein. Numerals mean amount of protein.

activity bespeaks as a side product, the production of heat which enables the body to keep an equal temperature. The bodily weight remains the same, in complete rest with a minimum of food, because the material used up is replaced. If this minimum food is not given, the internal working of the body persists, the material to sustain same being derived from the reserves of the body. There being no replacement through food, the body weight is reduced.

The maximum in the quantity of food taken is the amount that the stomach and bowels can

just about master without injury. This amount being the tolerance limit of the bowels. Minimum and maximum are under the physiological conditions of the individual not exactly fixed, yet, on the whole, well defined quantities. In diseased conditions, the maximum can vary greatly and also be very greatly reduced.

Between minimum and maximum lies the latitude of nourishing the body; within these borders one can be thoroughly nourished.

The conception of optimum feeding is entirely subject to the functioning of the body. We understand under optimum feeding the feeding that performs the ordinary requirements of the body, and under this feeding the body thrives the best. In a sound healthy body this is best shown when the body retains its weight in spite of daily regular work. The nursling receiving the optimum meals must thrive daily and increase in weight rapidly. Growth and increase in body weight belong to the normal development of the nursling. The demand that body weight increase daily does not exist in the following years. The increase in weight in later years is slower and is apparent only in lengthened intervals.

Up to the present, the determination of the quantity of food required for the human organism was based, according to Rubner, on the external surface of the human body.

Rubner has pointed out, or rather proven, that the consumption of energy of a hungry individual and a resting individual (warm blooded) of unequal body size is proportional to body surface. The direct determination of the body surface is a toilsome affair and not exact, and open to many objections.

Von Pirquet replies to this that the standard number of Rubner's were obtained from a hungry individual and a resting being. Such conditions are really exceptions—T. B. patients confined to the bed. In normal times we do not go hungry, but we satisfy our longings several times daily. The growing active child and the laboring man show different oxydizing processes than in the physiological experiments of Rubner. The laboring man does not work to prevent his bodily temperature from sinking. On the contrary, he will have to perspire to get rid of the heat that his working body produces. The heat produced by

the body is not the principal aim of living, but a by-product of the bodily process.

The important linear measure for the system of Von Pirquet is the sitting height; the distance from the crown of the head to the sitting surface. Von Pirquet's attention was attracted to the importance of this measure incidentally while studying the development of the body, and he determined that between the sitting height and bodily weight there is a very simple relation in the sense that the sitting height of man raised to the third power with slight variation equals ten times the body weight (in well-nourished individuals).

Von Pirquet investigated further whether for this surface, determined through theoretical considerations, one could not find a real practical foundation and thought of the surface of the intestines as a food surface in its relation to sitting height from the reflection that the food is taken up by the intestines, and here obtained easily retained numbers.

Von Pirquet found a very interesting work of Henning's of the year 1881, in which it was proven that the length of the intestines in children and adults is easily reckoned from the sitting height. The new born has a sitting height of 33 c.m.; his intestines is 3.3 meters long. The sitting height of an adult is 87 c.m.; his intestines is 8.7 M. long. ($L = Si^{10}$.)

It is necessary now to obtain a knowledge of the width of the bowel. This is not a fixed width, but varies considerably. One can increase the width more or less with force. Width 1-10 of sitting height.

The essence of the Von Pirquet calculations lies in the relations of the daily food to the $\frac{2}{3}$ power of 10 times weight. This is the vital point of the conception. The identifications of $\frac{2}{3}$ power of 10 times the weight with resorbing surface of the bowels as an allowable plastic measure, which renders the popularizing of the system much easier.

The manner of reckoning the daily requirements of food can be figured out. It must be kept in mind that for the daily necessities for man two relatively fixed values are given—maximum and minimum. The maximum, that amount of food that the intestines can just take without being injured, and consists of N. value. 1 N. to 1 C.M.² intestinal surface. The quantity

of food in N. value consists, therefore, of as many N. as there are C.M.² in intestinal surface. As the intestinal surface equals Si² C.M.² so the maximum = Si² N. The maximum of the daily quantity of food for a nursling of 40 C.M. sitting height 40² = 1600 N. As the nursling subsists on Mother's milk entirely, it means 1600 g. In a grown person with 90 C.M. sitting height, the quantity of daily food required for maximum in N. value = 90² = 8100 N. or 8.1 liters of milk. This amount of milk could not be taken as milk, but in mixed food reckoned in N. quadrated sitting height. Shortened siqua gives, therefore, the maximum of daily food required in N. values, or, in other words, we can say instead of siqua in N., siqua = 10 N. siqua = 10 Dezin Siqua. The maximum = 10 Dezin Siqua. The minimum of daily food which is required to supply the demands of the inner workings of the body is 3-10 of the maximum quantity = 3-10 Siqua or 3 Dezin Siqua.

The nursling above mentioned having 40 C.M. sitting height would cover the requirements for the internal workings of the system with 1600 N. \times 3-10 = 480 N. or grams of Mother's milk minimum. The adult with 90 C.M. sitting height with 8100 N. = 3-10, 2430 N. The nursling with this quantity of food and normal life could subsist having stationary weight; the adult only on absolute quiet, absolute rest in bed.

In severe sickness accompanied with high temperature, the adult could occasionally live on a milk diet alone; since for practical purposes cow's milk and Mother's milk are equivalent as foods, having the same N. value. We learn from the above calculations that to cover the minimum requirements of the adult having sitting height of 90 C.M. 2430 are necessary.

The optimum of the daily food values varies at different ages and in different occupations. The calculations for the daily food necessities follows, therefore, in a manner requiring the minimum to be covered.

For all functioning of the organism the minimum requirements must always be added. In diseased conditions of the body it may happen that the minimum requirements will cover all demands, and even less than the minimum will do—(fasting in ulcers of the stomach). On the other hand, in case of hard labor (blacksmith,

steel workers, or wet nurses, nursing other children besides their own) optimum will be the maximum. In working animals the maximum good in maximum working demands will equal the optimum. As a rule, however, the optimum is the happy medium between minimum and maximum.

The additions to the minimum, 3 Dezin Siqua, are easily figured out according to the following summary:

For growth	1	Dezin
For adding fat.....	1-2	Dezin
For light sitting labor.....	1	Dezin
For standing labor, light bodily occupation or moderately active movements and children playing	1	additional Dezin

Practical examples:

First half year—

Minimum	3	Dezin Siqua
Addition for growth.....	1	Dezin Siqua
Addition for fat deposit.....	1-2	Dezin Siqua
Total	5-6	Dezin Siqua

Second half year—

Minimum	3	Dezin Siqua
Addition for growth	1	Dezin Siqua
Addition for fat deposit.....	1	Dezin Siqua
Addition for sitting and other muscular movements	1-2	Dezin Siqua
Total	6-7	Dezin Siqua

Second Year, end of child's year—

Minimum	3	Dezin Siqua
Addition for growth	1	Dezin Siqua
Addition for standing movement and employment		
Addition for movements running around in playing according to activity.....	2-4	Dezin Siqua
Total	6-8	Dezin Siqua

At the age of puberty 7-8 Dezin Siqua will likewise be necessary.

If one wishes to accumulate fat in under-nourished children or in convalescence after an attack of sickness, the children will have to be kept quiet in bed and be fed as if in full activity; then the food that would be used up in full activity will deposit fat and increase proteids in the body.

In adults the addition for growth will not be necessary; also the addition for fat, except for under-nourished and convalescent individuals. For these reasons the necessary quantity of food will be calculated as follows:

Minimum	3	Dezin Siqua
Addition in sedentary occupation.....	1	Dezin Siqua
Total	4	Dizen Siqua

For the different years and occupation Pirquet determined the following Hekton values:

Nursling	Nursling	2 to 3 years
	From 8 months to 1½ years.	
Gradually raising quantity to 10 HN (1. KI.)	10-15 Hn.	20 Hn (11K.)
4 to 7 years	8 to 11 years	
25 Hn. (II a.)	30 Hn (III.)	
Girls of 12 years.	(End of puberty.)	Boys of 15 years (End of puberty)
35 Hn. (III a.)		40 Hn. (IV KI.) to 45 HN. (IVa KI.)

The amount of food that would suffice to nourish a child in the ten year old class is as follows:

Sitting Height in C.M.	Daily Quantity Hekton	Food Class
42-50	15	Ia
51-56	20	II
57-62	25	IIa
63-68	30	III
69-73	35	IIIa
74-78	40	IV
79-82	45	IVa

Example of a nursling in the 7th month who has received farina. (Double the amount of food. Sitting 40 C.M.; Siqua = 1600. The child sits and is lively; therefore, receives 2 Dezin to the 5 Dn. given a nursling. This makes 7 Dezin. The necessary amount of food is, therefore, $1600 \times 7 \cdot 10 = 1120$ N. If we want to give five milk meals; 1 cereal meal (midday meal) we prescribe as follows:

5 × 160 g. = 800 g. ½ milk = 400 C.M. cow's milk and 400 g. water = 68 g. sugar.	
The cereal meal — 2 × 160 g. farina gruel = 320 N.	
The day's quantity equals 1,120 N.	
A nursling of twelve months receives five meals daily besides milk is given; milk, vegetables and soup.	
Sitting height = 40 C.M.	
Siqua 45² = 2025.	
Food requirements	3 Dezin
Additional for growth	1 Dezin
For accumulation of fat	1 Dezin
Sitting occupation	1 Dezin
Lively movements	1 Dezin

Total	7 Dezin	Siqua =
2025 × 7/10 in round numbers =	1400 N.	= 14 H.N.
We use 3 × 200 milk =	600 N.	= 6 H.N.
We had 3 × 17 g. 51 g. sugar =	300 N.	= 3 H.N.
For three meals—		
For mid-day meal 100 g. soup =	10 N.	
With 8 g. farina boiled down =	40 N.	
100 g. vegetables—equal food =	100 N.	= 1.0
15 g. bread =	50 N.	= 0.5
100 g. broth =	300 N.	= 3.0

Total	1400 N.	= 14 H.N.
The above food is distributed as follows:		
6 a. m. 200 g. milk 17 g. sugar =	3 H.N.	
9 a. m. 200 g. milk 17 g. sugar =	3 H.N.	
0.5 1.0		
12 a. 100 g. soup 100 g. vegetables =	2 H.N.	
0.5 15 g. bread		
3 p. m. 200 g. milk 17 g. sugar =	3 H.N.	
6 p. m. 150 g. farina gruel =	3 H.N.	
Total =	14 H.N.	

SOMETHINGS ABOUT EMPYEMATA.*

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It is with design that I have chosen the title "Somethings About Empyemata," presuming thereby to grant myself pardon for failing to present to you a treatise such as the ordinary

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rules of composition demand. Instead I shall attempt to present, in a brief, concise resumé, some isolated observations noted in the course of a study of 204 cases of empyema. There were, in this series, 126 deaths of which 109 came to post-mortem examination. Of these latter 78 had been followed by roentgenograms. I shall consider here three main topics, namely, the classification of empyemas, factors concerned in their diagnosis, and the diagnosis of some of the commoner forms.

CLASSIFICATION

Empyemata may be classified:

Anatomically: as to the position they occupy in the pleural cavity in relation to the intrathoracic organs.

Pathologically: as to (a) the character of the exudate; (b) the manner and form in which it exists.

Bacteriologically: as to the nature, type and variety of the causative organism.

Chronologically: (a) as to duration; hence, 1, acute; 2, subacute; 3, chronic.

(b) In relation to the pneumonia: 1. Parapneumonic, when they accompany a pneumonia. 2. Meta or post-pneumonic, when they follow a pneumonia.

(c) In relation to the empyema: 1. Primary, when they accompany or follow directly upon a pneumonia. 2. Secondary, when they follow upon an already existing empyema, e. g., an interlobar or substernal empyema resulting from a diffuse empyema.

It is assumed from this manner of classification that they never occur without some pre-existing pulmonary infection. Hence such as follow upon simple pleural effusions cannot rightfully be included here.

Anatomically considered, there are eleven varieties, in the order of their frequency as follows:

1. *Costo-pulmonary*—occupying that space between the visceral and costal pleuræ or more broadly speaking, between the lung proper and the thoracic wall.

2. *Intra-pulmonary*—or as they are more commonly designated, pulmonary abscesses.

3. *Inter-lobar*—occupying those areas in which the visceral pleuræ come in contact, namely, the fissures.

4. *Sub-sternal*—designating those lying directly behind the sternum, between the reflections of the right and left pleuræ. Consequentially, as can be seen from the anatomy of the part they are limited to the superior mediastinum.

5. *Pericardial*—of these there are three varieties:

A. *Costo-sterno-pericardial*—a term used to designate such empyemas, usually very small, which have for their floor the pericardium where it lies in relation to the chest wall; that is, the left one-half of the lower portion of the body of the sternum and the inner ends of the cartilages of the 4th, 5th and 6th ribs.

B. *Pleuro-pericardial*—designating more expressly those empyemas lying between the pericardium and the pleura of the left lower lobe, where this is reflected over the pericardium.

C. *Mediastino-pericardial*—designating those empyemas occupying that area between the pericardium and the pleura covering the right lower lobe. Hence virtually existing in the anterior mediastinum.

6. *Diaphragmatic*—those lying on the diaphragm and roofed over by the base of the lung.

7. *Costo-diaphragmatic*—occupying the costophrenic angle, either anteriorly, posteriorly or laterally. They are roughly triangular in shape, the base being formed by the diaphragm, the perpendicular by the ribs and the hypotenuse by the compressed lung and its fibrinous exudate.

8. *Mediastino-pleural*—in contradistinction to substernal variety, are those lying between the mediastinal tissues and the reflection of the pleuræ on either side. Hence they are extra-pleural, lying directly in relation to the mediastinum, but not occupying it.

9. *Apical*—enveloping the entire apex of the lung like a cone, or localized over any portion of it.

10. *Para-vertebral*—lying alongside of the spinal column, throughout the whole or part of its length.

11. *Myo-pleural*—in reality extra-pleural abscesses lying between the intercostal muscles and ribs and the parietal pleura.

Pathologically considered:

(A) As to the character of the exudate, they may be—

- | | |
|--|----------------------|
| 1. Serous | } potential empyemas |
| 2. Fibrinous | |
| 3. Hemorrhagic | |
| 4. Purulent | |
| 5. Mixed or complicated by a pneumothorax. | |

While it is true that in the strictest sense the serous, fibrinous and hemorrhagic varieties may not be classified as empyemata, yet with the exception of the serous effusion, as occur in tuberculous pleurisy, it is the rarest exception to find serous exudates due to other organisms, which do not eventually become purulent.

(B) As to the manner and form in which they exist.

I. *Diffuse*—applied to such empyemata as are spread over a considerable area, lie more or less free in the chest cavity, show a tendency to shift position and do not require the breaking down of adhesions for drainage. This term applies especially to the costo-pulmonary variety. These may be

(a) *Multilocular*—in which the empyema cavity is divided into several or innumerable pockets or cells by soft shaggy friable bands of fibrin, giving the pleuræ, when separated, a mosaic appearance.

(b) *Simple*—in which there is an absence of such adhesions, there being but one cavity.

II. *Encapsulated*—a term applied to primary or secondary empyemata, which by some freakish circumstances have localized in some portion of the chest cavity, becoming walled in by fibrinous adhesions. They are found most frequently in areas where the anatomical relations are such as naturally to prevent their immediate escape, for example, between the fissures and between the pleuræ and pericardium. Hence they are prone quickly to become walled in by adhesions. These may be

(a) *Single*—when there is but one such encapsulation.

(b) *Multiple*—when there are more than one. Either of these may be simple or multilocular.

III. *Combined*—In addition to the above any variety of empyemata may be present in the same chest that is the diffuse and encapsulated may co-exist. One may be simple, another multilocular.

Bacteriologically considered, we find either as primary or secondary invaders, the following organisms:

1. Pneumococcus; Types I, II, III, IV.
2. Streptococcus; pyogenes.
Hemolyticus } long or short chain.
Non-hemolyticus }
3. B. Friedlander's.
4. Staphylococcus.
albus.
aureus.
5. Unidentified organisms such as a gram positive diplococcus.
6. B. Tuberculosis.
7. Mixed.

Factors in diagnosis. From this brief review of the classification, one can readily appreciate the difficulties encountered in making a diagnosis. Among the principle factors concerned there are five:

1. The condition or state of the lung in reference to the presence or absence of consolidation. If present, whether the consolidation be complete or massive, as in lobar pneumonia, whether it be partial and patchy as in broncho-pneumonia or again whether absent as in interstitial pneumonia. Further, the physical signs may be modified by the presence of two distinct types of pneumonia in the same lobe or lung. Again, if the bronchus leading to the involved pulmonary tissue is patent, permitting the free passage of air, the signs differ from that condition in which it is obstructed by mucous plugs.

2. The position of the lung is of no less importance. In cases in which the lung is collapsed the result of compression by a large amount of fluid, so that air fails to reach the alveoli, the findings would, of necessity, differ from a collapsed lung, the result of a pneumo-thorax. In this latter condition aeration of the alveoli occurs. Again, should the lung be adherent to the chest wall, throughout its entire surface, the findings are considerably modified and differ from those in which merely a portion of the lung is so attached.

3. Next to be considered is the character of the exudate, for both the physical findings and the appearance of the x-ray plate depend upon whether it is serous or purulent, acute or chronic, the amount and the rapidity of formation.

4. Of importance second to none is the loca-

tion of the exudate. The presence of those readily accessible, such as the costo-pulmonary and costo-diaphragmatic varieties are easily determined, whilst such as the mediastinal and the para-vertebral are almost without the range of diagnostic possibility. Here, too, must be considered the presence of encapsulations, multiple empyemas, interlobar empyemas and the complete overshadowing of these by the presence of a massive diffuse or multilocular empyema occupying the costo-pulmonary space.

5. Complications and conditions within the chest, such as pericarditis with effusions, pneumothorax, pulmonary fibrosis, deformities of the bony framework and chronic empyema play not an inconsiderate role in modifying those findings upon which a diagnosis rests.

Diagnosis.—While the diagnosis of the presence of an empyema presents in the main no great difficulties, still the determination of its exact location and its extent is oftentimes a problem. In general, the diagnosis depends upon a complete history, careful physical examinations, roentgenograms and exploratory puncture. I shall try to point out some of the salient features in the diagnosis of the various types.

Costo-pulmonary. This, the classical form, occurring as an acute, primary, diffuse, purulent, meta or post-pneumonic empyema, presents a more or less constant picture.

When, following the decrudescence of fever in lobar pneumonia, the fever reappears daily with an afternoon rise; or shows a sudden but temporary elevation; or continues low, but is persistent and when the *ralé* *redux* ceases to exist in its original intensity, an accumulation of pus in the chest cavity is suggested. When along with this the leucocyte count continues to rise, fluctuates or remains persistently high, careful scrutiny of the chest is in order. When further, the lung findings as present in the resolving or resolved pneumonia have cleared, and when the progress of the patient, as evidenced by increase in strength, weight, appetite and mental activity is at a standstill, further and more searching examination of the chest is imperative and a stereo-roentgenogram should be made. When, to the persistent rise in temperature, the persistent increase in leucocytes, the retarded or absent convalescence, chills and sweats, or sweats without chills are added and when the stereo-roentgenogram fails to reveal, definitely, the presence of

pus, still another patient painstaking, comparative physical examination of the chest must be carried out. Where areas of dullness exist, with or without diminished or absent breath sounds, cautious needling of the chest should be resorted to, using a very sharp, large calibre needle and an aspirating syringe. Such in brief are the ordinary methods to be employed in searching for this type of empyema.

In the para-pneumonic type of empyema, such as exists simultaneously with a pneumonia and which in most instances is due to the streptococcus, certain outstanding features present themselves.

The onset in such cases is usually abrupt, preceded not infrequently by indisposition, slight malaise, chills or chilliness, headache, coryza and dizziness. Again it may follow upon a cold or bronchitis, a sore throat or one of the exanthemata, especially measles. Like pneumonia, it is ushered in by a sudden, sharp, intense cutting pain in either or both chests. With this there is dyspnea and hyperpnea, the movement of the diaphragm is restricted and the respirations are short, jerky and of increased frequency. The features are drawn, the expression anxious, the eyes injected, sunken and glistening, the cheeks hollowed, and the skin covered with sweat, is of dusky scarlet hue underlain by a pasty, yellow-brown cast. The pulse at first slow, soon becomes rapid, weak and thready, the temperature fluctuates from 101 to 103 and the patient presents the picture of one suffering from some mortal disease.

The chest findings, if taken by themselves during this period, show little in proportion to the symptomatology to suggest pulmonary involvement. Lessened excursion with voluntary fixation of the affected side, slightly impaired resonance and muscle spasm may or may not be present. The breath sounds, usually depressed, are somewhat distant with an absence of the normal vesicular murmur and some prolongation of expiration. Occasionally there are a few fine or sibilant rales. The whispered voice is absent and the spoken voice slightly intensified, but there is a notable freedom from any abnormal findings such as bronchophony and pectoriloquy. Pleural friction sounds are usually absent.

With a beginning accumulation of fluid, which usually occurs within twenty-four to forty-eight

hours, the pain ceases, dyspnea becomes more intense, and cyanosis more marked. There is some impairment of resonance, approaching dullness, expansion is lessened and the diaphragmatic excursion as determined by percussion is limited. The breath-sounds are distant and both the spoken and whispered voice sounds take on a soft blowing character. The normal vesicular murmur is less distinct and a few fine rales are present, the result of the expansion of an atelectatic lung.

As the amount of fluid increases, which it does very rapidly, often reaching as much as three thousand cubic centimeters in twenty-four hours, the symptoms merely become more pronounced, but the physical findings undergo a complete change. With such accumulations there is compression of the lung, the fluid is turbid and becomes purulent only after a few days. The most striking phenomenon is the percussion note, whose components are two, namely, the palpatory phenomenon and the auricular phenomenon.

As the pleximeter finger is laid upon the chest it perceives a sensation of fullness and resistance. The intercostal muscles are tense and tactile fermitus is absent. As the pleximeter finger is struck (the ear in the meantime remaining deaf to the character of the note elicited) one experiences the sensation which comes from percussing a stomach tightly distended with gas. The rebound, however, is absent and instead of that feeling of resiliency and "give" the pleximeter finger falls flat, striking with a thud.

Upon becoming attentive to the character of the sound elicited, one finds, contrary to expectation, not a note dull or flat, but one of a relatively resonant dullness. It is short, high-pitched and yet tempered to some degree with a cavernous quality.

Without further examination one may insert his needle, for such a note is almost pathognomonic of large amounts of serous or turbid fluid.

Upon auscultation the breath-sounds are distant with a complete absence of the normal vesicular murmur and usually no rales. Again, the breath-sounds are blowing in character and with either the spoken or whispered voice become distinctly bronchial or tubular and are heard close to the ear.

Interlobar. The subject of interlobar empyema

is sufficiently great to occupy a chapter by itself. Without attempting to do it justice, I shall point out a few of its characteristic features. Rarely primary, such empyemas more often co-exist with a diffuse empyema or appear after such an empyema has been drained. They show a predilection for the fissure between the upper and middle lobe, where they exist as a thick shaggy exudate of fibrin containing multiple pockets. As such, their presence cannot be determined by physical examination. The x-ray occasionally reveals them as the linear shadow of a thickened interlobar pleura. When, however, they are solitary, reach the size of a walnut, are near the surface and the costo-pulmonary space is free from pus, their diagnosis is less problematical. The symptomatology is that previously described, namely, fever, leucocytosis, chills and occasionally pain over the area of localization; there is impaired resonance or dullness, or where the empyema assumes proportions, distinct flatness. Surrounding this is an area of normal or an area of Skodaic resonance. The breath-sounds over the area are absent, but more intense surrounding it. The x-ray usually reveals a uniformly dense circumscribed shadow which, if followed in serial plates, will continue to increase in size as the accumulation becomes greater. These findings are to be sought in the third right interspace in the anterior axillary line, occasionally in the axillary space.

The insertion of a needle over the point of maximum dullness corresponding to the roentgenographic shadow confirms the diagnosis.

Sometimes one finds it necessary to insert the needle at different angles before the pus can be reached.

Substernal. Where small, diagnosis is impossible. Where they assume dimensions, the symptom of dyspnea, stridor, dysphagia, hoarseness and substernal oppression should bring to mind their possible existence. Dullness on percussion over the sternum and an unusually wide mediastinal shadow strengthen the probability. By inserting a needle into the mediastinum at the left border of the sternum in the second or third interspace, the empyema cavity sometimes may be reached. For obvious reasons the utmost caution should be observed.

Intralobar (pulmonary abscess). These, as seen in pulmonary tuberculosis, in pulmonary

emboli, in the aspiration of blood and foreign bodies, do not fall within the province of this paper. Those associated with pneumonia and empyema, unless large, are difficult to detect. Should they empty themselves by way of the bronchi, the character of the sputum might lead one to suspect their presence. Being masked so frequently by a co-existing costo-pulmonary empyema or thickened pleura, physical examination serves little, and even the x-ray frequently fails to reveal their existence.

Being acute, they are without the usual surrounding inflammatory exudate. Hence the shadow density which such an exudate would cast and which is one of the earmarks of pulmonary abscesses, is absent. Further, the interpretation of their presence depends upon their size, their location, their outline and whether they are filled with an exudate or are empty.

When one finds a circular or oval shadow, more or less regular in outline, enveloping a darker (when the cavity is filled) or lighter (when the cavity is empty) shadow of uniform density; when this shadow is located near the center of the pulmonary parenchyma and borders upon the abrupt termination of a bronchus, one may be reasonably sure that he is dealing with a pulmonary abscess.

Pericardial. When these lie between the pericardium and chest wall as in the costo-sternal variety, they are very small and their position so obscured by the ribs and sternum, that both the physical examination and the x-ray plate fail to reveal their presence. In the pleura-pericardial and mediastino-pericardial varieties the diagnosis is usually arrived at by exclusion and takes into account chiefly the physical and x-ray findings.

Almost always secondary to a pre-existing empyema their presence at first is indicated merely by the signs of pus, as aforementioned, namely, elevated temperature, increase in the number of leucocytes and occasionally chills and sweats. Upon careful and searching examination of the chest, one commonly, but not invariably, finds a pleuro-pericardial friction rub. It is heard only upon inspiration as a to and fro grating murmur, synchronous with systole and diastole and is found almost always over an area about 25 cm. inside the apex impulse. It usually persists until agglutination of the parietal pleura and pericardium takes place. As compression of the ligua

pulmonis (on the left) occurs a few fine or sticky ralés are heard upon deep inspiration. As the accumulation of pus becomes larger, the percussion note over the involved area becomes duller. But, because of the proximity of the empyema to the pericardium, it is easily mistaken for an increase in the transverse diameter of the heart. Upon auscultation, the breath-sounds, due to the compression of the lung, may be blowing in character, more often they are suppressed. The absence of ralés, pronounced dullness and bronchial breathing serve to distinguish it from consolidation. The absence of muffled or distant heart tones, and the ability to palpate the position of the apex beat, together with an absence of a pericardial friction rub, serve in a measure to distinguish these empyemata from pericardial effusions.

Along with this the x-ray findings are helpful. One finds in the pleura-pericardial as well as the mediastino-pericardial variety a feathery or even denser irregular shadow, apparently merging with that of the pericardium. However, if one look closely he may frequently perceive the clear-cut outline of the pericardium, which can be distinguished as something definitely apart from the softer mottling of the pericardial empyema. Further the irregularity of the shadow alone is suggestive, for even with large pericardial effusions the outline of the pericardium remains regular.

One point of confusion does exist and that is the presence of a consolidation, beginning or resolving, in the adjacent pulmonary tissue. This cannot be distinguished from either of the varieties of empyema mentioned. In such the element of time is of some aid. In beginning consolidation, the shadow enlarges rapidly and becomes denser. In resolving consolidation it soon disappears. In pleuro-pericardial accumulations of pus, it usually remains unchanged and persists even for weeks.

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THE PROGRESS OF MEDICAL SCIENCE DURING THE WORLD WAR*

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Someone has said: "There isn't a great deal of life that is really strange. It's the same old

story and only wonderful to the young." No doubt these words were written by one not in intimate touch with the rushing, roaring stream of life, or it may be by one blasé, pessimistic, some time in the early Victorian era, before the great awakening that characterized the latter half of the nineteenth century had occurred. Be this as it may, who will controvert the statement that today we are living in the wonder-age of the world's history? This is a day of many marvelous things, not to the young alone, but to the old, time-hardened men and women as well. Recorded history does not reveal any period in which so much that was really strange emerged from the misty unknown for the edification and advancement of the human race as in the present. And it would seem that this is a beginning only and that the progress thus initiated will, like the Sisyphæan stone, once started on its way, sweep on with increasing velocity—whither and with what limitations and to what purpose? The seemingly impossible is happening constantly. One accomplished wonder but opens the way for the next and greater. The supernatural of seventy-five years ago is the accepted and to be expected reality of today. Doubtless tomorrow that which we now regard as supernatural will, with increasing knowledge, be the commonplace reality in the physical and natural life and new ideas of the supernatural will be popularly entertained. Thus are we speeding toward that day when death itself, "the last great enemy," will be conquered, and that change be regarded no longer as supernatural, but just as real and unnoteworthy as the falling asleep at night and the reawakening in the morning light. This is no idle dreaming. It is the inevitable conclusion toward which conscious and thinking man must tend as he views the startling and seemingly impossible developments of the succeeding days.

Do we ever stop a moment to realize, if we can, how rapidly the wheel of progress is revolving? No one here tonight is aged and yet within the span of life of the oldest here nearly all that constitutes our modern idea of comfortable living has been evolved and made commonplace. It was only as recently as 1856 that Morse devised the telegraphic alphabet and by this discovery encircled the globe in a few seconds of time. Marconi, Tesla, Edison and the other wizards of the electrical science have followed

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closely upon his heels, eclipsing his deeds and then their own by wonderful and still more wonderful discoveries—and that sturdy science is still in its early infancy. No doubt some here remember when the first telephones were installed in our cities to the wonder and delight of all; and when elevators, which have made possible the construction of the Woolworth building and other modern skyscrapers, were first planted in our houses; and I myself recall, as a boy, when arc-lights were tried out for a year in Philadelphia on “the quiet street of Chestnut”—and I defy anyone to call me old. Today we talk across the continent with comparative ease and no home would be complete without its telephone and electric service. Wireless telegraphy and telephony are with us now and interplanetary communication through ether-waves is looming on the scientific horizon.

It was only in 1832, but 88 years ago, that the first railroad in this country and in the world was laid between Philadelphia and Germantown, and about the same time steamboats began to ply our rivers and lakes. Today the civilized world is gridironed with steel, and the mammoth coal and oil-burning locomotives and steamships render heavy commercial and passenger transportation but a trifling matter. Truly, the age of steam rose rapidly, only, however, to begin its decline in our own day before the strenuous advance of the age of electricity. The same year, 1832, one is amused, when reading of the celebration of the centennial anniversary in Philadelphia, on February 22, of the birth of Washington, the “father of his country,” to note that the historic tower of Independence Hall “was brilliantly illuminated with glass lamps,” which had been loaned by patriotic citizens for that purpose. It was not until the following year that gas-illumination was introduced in Philadelphia, and general electric lighting is a development of but very recent date, within the memory of us all. Now, all the world is ablaze with electricity and the “great white ways” of the cities amaze and delight.

And thus it has been in every field of scientific activity. Röntgen, delving in the mysteries of the ultra-violet rays of light, discovered in 1895 the marvelous x-rays, which defy the opacity of certain tissues and have made it possible for us to look each other through and through—those

rays which reached the acme of their usefulness to date during the recent war and compelled the formation of a great and valuable section of the medical department of the world's armies. Organic chemistry took a new lease on life with the discovery of the coal-tar group of derivatives three decades or so ago and with this increased activity sprang into existence the great number of synthetic compounds which have done so much for medicine and other advanced sciences. Today the scientific world is all agog over the new theory of relativity propounded by Albert Einstein of Berlin, whose discoveries regarding gravitation and whose theories concerning time and space are, it is claimed, as epoch-making as were the discoveries of Copernicus, Kepler and Newton.

After centuries of patient waiting and planning, marked now and then by costly experimentation and the loss of valuable lives, the dream of “Darius Green and his flying machine” became true in our day—as dreams so often do after undergoing the bombardment of biting ridicule and violent opposition—and with the work of Langley and the Wright brothers aviation came to stay as a long step forward in the problem of transportation. I doubt not that in another decade the air will be vibrant with the roar of transcontinental aerial lines of travel which will be just as safe and infinitely cleaner than is railway travel today. Truly in our time has Mother Shipton's prophecy been fulfilled in every detail. Men now ride under rivers and ocean bays and plunge speedily and noisily through mountains and beneath the roar and bustle of the world's greatest metropolis; carriages now move without apparent motive power, and the horse as a means of traction is speedily disappearing from the highways of life, if not from the country byways and lanes. The trolley-car, the automobile, the motor-truck and the tractor, the submarine and the tank have all appeared in the lifetime of the youngest here tonight. We wonder what would have been the outcome of the great world-war had these not been available for the rapid transportation of men and the munitions of war. The twenty thousand automobiles of Gallieni's army won the first battle of the Marne and forestalled the capture of Paris.

With the explorations of Peary, Amundsen and Scott the hopes of centuries of ambitious and

herculean effort were realized in our time, and the poles of the earth today, while not familiar terrain, at least have been charted and the coveted laurel of discovery has been won by intrepid men and clean. Who cannot recall the thrill of delight which stirred the very marrow of his bones when first he gazed upon the wonders of the cinematographic screen? It was only in 1894 that Edison patented this fascinating invention. Today it is recognized as one of the best mediums of instruction as well as of mental and physical relaxation at our disposal. Associated with it in our minds is that other brilliant Edisonian invention of an earlier date (1877), the phonograph, which has imprisoned the voice of man and musical sound upon hard rubber discs and perpetuated them forever. This wonder has now largely taken the place of the piano in the average household. Familiar as we are with these great and marvelous inventions, do we realize in full their value from an historical and educational point of view? Let us suppose for a moment that we were privileged to see Washington and the patriots of Valley Forge and the other memorable scenes of the Revolution move upon the screen, as for instance at the battles of Princeton and Yorktown, or in Independence Hall signing the Declaration of Independence! Suppose we could hear their voices, true to life, issuing orders for the campaigns or delivering the farewell address to the officers at the close of the war! Suppose we could see Lincoln and his cabinet in session and the noble leaders of the Civil War in some of the stirring events of that day of national tribulation—the signing of the Emancipation Proclamation, the Gettysburg address, the inauguration! Who would not be thrilled beyond expression were these things possible and visibly and audibly enacted upon the cinematographic screen? Yet a century from now and less our successors upon the world's stage will enjoy just such privileges and thrills as these.

But not alone in the realm of science has this marvelous progress been noted during these recent years. Political and sociological changes, incredible and of far reaching influence, have occurred the world over. Truly, empires are rocking, thrones are tottering, monarchies crumbling and royalty fading into the limbo of discarded grandeur! Where now are the Braganzas, the Romanoffs, the Hapsburgs, the Hohenzollerns?

Democracy has seized upon the world; the people are coming into their own, when they shall have throttled the red masses of bolshevism that have sprung like the hydra-headed monster of old out of the turmoil of the war. Portugal, Germany, Austria, Hungary, Poland, Czecho-Slovakia and other smaller republics, people-ruled and people-free, now rise where but yesterday almost absolute monarchism prevailed; and incidentally with this democratic governmental evolution the geography of Europe has been rewritten and revised to the perplexity of students of former days. Twenty-two years ago the sinking of the "Maine" transformed this country from a continental republic into a world power. What changes have since occurred here, changes that rival the wonders of the Arabian Nights Tales! The Caribbean, then a foreign sea, is now an American sea, "the entrance to the great American trade route through the Panama canal." The Spanish Philippines now have "native rule under an American governor." Japan, then still the "ward of Perry," is now a world power, and has "dispossessed Russia and Germany of Asiatic holdings, and has issues of gravity with the United States. Then the "isthmian waterway was a jungle-grown French failure." The Pacific then was a "sea for traders and foreign missionaries;" today "American possessions and naval stations spread across that ocean flanking the trade routes." Then we were an isolated nation; today we are considering the making of European alliances and the formation of a world league.

After six centuries of Moslem rule, who so bold as to dream that in our day the Turk would be expelled from Europe, that the Holy Land would again fall under the domination of Christian rulers and that the long-sighed for time of the restoration of Judaism would become imminent? Yet Allenby and others have brought just this to pass but yesterday! And, *mirabile dictu*, the oldest empire in the world's history, China, the sleeping giant of the East, whose throne was established by Yu-hi in 2852 B. C., has begun to shake off the lethargy of centuries and now lives the infant republic of Asia, whose countless millions under competent leadership might readily overrun the world and establish universally the civilization of the vast and mystic Orient. Along with these mighty and world-shaking political revolutions old and time-honored ideas and be-

liefs have fallen nevermore to rise and new and astonishing doctrines dominate the masses. Woman suffrage, stimulated by the magnificent work done by the women of the world during the Great War, is sweeping this country, England and other countries of Europe and Asia. At last after weary years of determined effort in the face of ridicule and bitter opposition the dream of John B. Gough and Francis Murphy has been realized and now we are face to face with national prohibition. Sociology today proclaims the death of autocratic exploitation of man by man and the slogan, "Liberty, Fraternity, Equality," is becoming no longer a phrase to be mouthed by orators and demagogues, but a living, burning fact. Time would fail me were I to expand on this age of wonders in the world in all the fields of action and endeavor. What I have thus briefly noted is quite sufficient, I think, to refute the quotation with which I began this address. There is much that is really strange and new in the world today, and "eye hath not seen nor ear heard, neither hath it entered into the heart of man to conceive the things" that are laid up in the rapidly unfolding pages of futurity.

Think not amid these epochal and kaleidoscopic changes that have amazed and still are amazing mankind, that the great and noble and venerable science of medicine alone has remained dormant and unshaken. In medicine and surgery, as in all other sciences and fields of research, this has been a vital and transitional period of upheaval and overthrow, of iconoclastic skepticism and irreverent profanation. The age-old established views and theories of the fathers of medicine are being subjected to the cold, critical and analytical eye of modern discovery and scientific investigation with startling results. It took two thousand years for men to awaken, but recently, to the fact that malaria was not produced by miasmatic poisons emanating from swamp-lands, but that it resulted from the altogether preventable bite of a certain species of mosquito. It is not taking so long now to overthrow and refute other beliefs of equally sound standing and as honorable lineage as this. Dr. Ira S. Wile, in his paper, "Medicine of Tomorrow," has enunciated a pregnant truth when he asserts that "the era of preventive medicine is at hand." Almost

all the advances in medical science of the present century have been along this line.

There is a glamour associated with antiquity. The bright lights in medicine of other days loom larger in the perspective than do those no less brilliant names of the doers of deeds of our own day and generation. We live too near these to appreciate their true worth, and yet with the passing of the years they find their proper places and relation to things and with the same mirage-like effect they grow in magnitude and splendor of great achievement. This recent developmental period in medical science, for instance, even now coruscates and is iridescent with glowing names. What shall we say of such immortal lights as Kassabian and Charles Lester Leonard, the x-ray pioneers of Philadelphia; of John Hall Edwards, the eminent radiologist of England; of Clarence Dally of the Edison laboratory, and of Radriguet of France, and a host of other brave men and true, who gave their lives in determining the efficacy of the Röntgen rays in medicine? What of Louis Pasteur, "the son of a French tanner, a chemist by education and training, the father of bacteriology, the discoverer of the effective method of combating infectious diseases, he who disproved the idea of spontaneous generation and laid the scientific basis for Lord Lister's aseptic surgery" (*Stockard*)? Huxley estimated that the money value of Pasteur's discoveries in anthrax alone saved the world in sheep and oxen enough to cover the whole cost of the war indemnity paid by France to Germany in 1870; and this to say nothing of his invaluable work in hydrophobia, whose terrors he has practically abolished for evermore. What of Lord Lister, the founder of asepticism and antisepticism in surgery which have vanquished the gravest enemy of surgical technic and practically abolished some of the greatest terrors of the surgery of the civil war period? What of Haeckel, the monist; of Huxley, prince of scientists; of Ehrlich; of Gorgas of yellow fever fame; of Smith and Russell? What shall we say of Walter Reed, the discoverer of the cause of yellow fever, in whose memory was founded by our government the great Walter Reed General Hospital in Washington, D. C., where it was my privilege to serve for some months during the recent war? What of Jesse W. Lazear and the other heroic physicians who braved the perils of the plagues of the earth and

solved the mysteries of their virulence but paid with their lives the penalty for their intrepidity? What of Eli Metchnikoff, the Russian zoölogist, who discovered "the phagocytic action of the wandering cells in the animal body and investigated the reaction of the organism to disease in the Institut Pasteur" (*Stockard*)? To him belongs the honor of demonstrating the great battle of the cells forever going on in our living bodies. What of Fritz Schaudinn, the young zoölogist, who first stained and demonstrated the specific spirochete (of syphilis) after others had sought it for years in vain and who investigated the ameba of dysentery and sacrificed himself when but little more than thirty-five in order to facilitate those investigations? Oh, no! The days of heroes and of moral and mental and scientific giants have not yet passed. We have them with us now. They labor among us often unseen or unnoticed, but they shake the scientific stage with their tremendous accomplishments. It is to their efforts, for instance, that is now due our knowledge of the action of rats, mice, flies, fleas, lice, mosquitoes and other useless vermin in the transmission and propagation of infectious disorders, as typhus fever, rat-bite fever and the various spirochetal diseases. As recently as June 7, 1919, the distinguished Surgeon General of the United States Army, Major General Merritte W. Ireland, in an address delivered at the Ninety-fourth Annual Commencement Exercises of the Jefferson Medical College of Philadelphia, enumerated some of the important advances in medicine made during the last two decades. Not by any means is the list complete, but even the non-medical listener here tonight cannot but be impressed by the notable scientific progress the Surgeon General has compiled. Listen, as I briefly rehearse his tabulation:

In 1898, Sir Ronald Ross demonstrated incontrovertibly that malarial fever is transmitted by the *Anopheles* mosquito and thereby doomed forever one of the pests of the tropics and of the warmer portions of our own country. As a result of this discovery and the prophylactic measures which have followed, it is interesting to note that the total number of deaths from malaria in our army during the recent war was but 13. The expected deaths on the basis of the civil war malarial rate were 13,951, and of the Spanish-American war 11,317. The same year, 1898, Walter Reed of the United States army, Victor Vaughan of Ann Arbor, and Shakespeare of Philadelphia, proved that typhoid fever may be transmitted

by contact and, in a certain percentage of cases, by flies. It was at Chickamauga Park during that year of the Spanish war that the millions of flies spread the fever among the troops with a resulting lamentable mortality. In 1917-1918, owing to the excellent sanitation practiced by Major Abbott, in the same park, where over 40,000 troops were encamped, scarcely a fly could be found, and typhoid fever did not exist—and to this I can vouch, for I was there and saw. Following Reed's discoveries it did not take long for the laboratory scientists to develop the antityphoid vaccines whereby typhoid fever is prevented as effectually as is smallpox by vaccination. In this connection it will be interesting to note some data prepared by Colonel Russell, of our army. Between September 1, 1917, and May 2, 1919, the average number of men in the field was 2,121,396. The total number of deaths from typhoid fever was but 213. Had the typhoid rate of the civil war prevailed, there would have been 51,133 deaths. Had the rate been that of the Spanish-American war, the number would have been 68,164 (Evans). Everyone knows that it is much more difficult to prevent typhoid fever in an army than it is in civil life because of the unavoidable pollution of the water supplies, the intense congestion of the camps and battle-lines, as well as the inevitable relaxation in sanitary matters among the men. As Evans has said, "so great are these difficulties that never in history have they been satisfactorily overcome, except in this war and in the Russo-Japanese war."

In the opening months of the twentieth century Walter Reed, Carroll, Lazear and Agramonte proved that yellow fever is transmitted by the bite of the *Stegomyia* mosquito, and another fell enemy of mankind was vanquished, soon to become an evil memory only. In 1900 Ashford discovered the presence of hookworm infection in Porto Rico, and in 1902 Stiles described the American parasite of the hookworm infection and traced its curious migration from the toes of those who went barefoot to their lungs and thence to the alimentary canal where the parasite finds its final lodgment in the body and produces the anemia and consequent laziness and inefficiency of its victims. His findings were still further demonstrated by Loos in 1904. In 1901, Dutton discovered the parasite of sleeping-sickness of the tropics and in 1903 Bruce proved that this disease was transmitted by the bite of the tsetse fly—and still another terror of the tropics was vanquished. In 1903, Metchnikoff proved the physiological relationship of the higher primates by inoculating the higher species of apes with the spirochetal (syphilitic) infection—to which all other animals appear to be immune. In 1904, Dutton discovered the parasite of African relapsing fever and in 1907 H. G. Novy found the parasite of the American variety, while in 1905, Schaudinn described the parasite of the great spirochetal disease of mankind (syphilis). This was quickly followed by the famous discovery of Wassermann in 1906, which Noguchi, the distinguished Japanese investigator of the Rockefeller Institute, modified and improved in

1911. In 1908, Harvey Cushing of Boston "produced the condition of infantilism experimentally in the dog; in other words, made an adult dog revert to an infantile condition"—a reversion of one of the greatest processes of nature, which Lord Kelvin in 1892 declared to be impossible. In 1910, Nicolle demonstrated conclusively that typhus fever is transmitted by the bite of the body-louse and thereby paved the way for the great and largely efficient prophylactic measures that were adopted by the armies of all nations during the world war. Today an energetic campaign is in progress to exterminate this repulsive vermin and thereby end for all time another dread pest, which has ever devastated the armies of the world. Three thousand British and American soldiers lie buried in Washington Square, Philadelphia, who died from the great typhus fever plague during the British occupation of the Quaker City—victims of this vile pest. In 1910 Flexner of the Rockefeller Institute experimentally produced poliomyelitis the cause of infantile paralysis, that dread of all mothers and a long step was taken thereby toward the mastering of this disease. The same year, R. G. Harrison grew nerve-fibers in an extra-vital culture, and another mystery of living nature was penetrated by the insatiable curiosity of man. In 1911, Rous proved that sarcoma, a malignant tumor of man and other animals can be transmitted by a filterable virus—only an additional step in the apparently endless and at present unsuccessful conflict which is being waged by man against malignant disease. The same year, Bass cultivated artificially the malarial germ, the plasmodium.

To this compilation may I add Colonel Russell's statistics relative to dysentery in our army during the great war? He found that the total deaths from this disease were 42, as compared with 63,898 for the civil war, and 6,382 for the Spanish-American war. Grouping the findings for typhoid fever, malaria and dysentery, the potential saving of life from these diseases during the late war was 128,754, as compared with the civil war and 95,595 as compared with the Spanish-American war (*Evans*). Could words speak more eloquently than these figures, or more effectively as a tribute to medical skill at this time, as well as a notable comment on the marvelous progress in medical science since the days of the civil war? Such is the incomplete list of great advances made in medical science, which General Ireland has compiled up to the beginning of the great war. It is a noble record, accomplished without the blare of trumpets or the noisy acclaim of the world—for it is ever so that the heroes of medicine work and achieve.

And then the storm burst. For almost fifty

years the war-clouds had been gathering and now in the fulness of time the greatest autocratic military power the world had ever seen, inflated with pride and arrogance and swollen with egotism and the inculcated belief in its destiny as a world-saver and instructor, confident that it was composed of supermen, physically, mentally, spiritually; that power, treading ruthlessly upon all the laws of man and internationalism, of morality and decency, and of God Himself, trampled roughshod across Belgium with the nefarious purpose of entering France surreptitiously by the back door—and, incidentally, set the world on fire. At once, all lines of activity, save those of war and of medicine and surgery with their allied sciences, ceased while the nations of the world went about the almost superhuman task of destroying the monster of absolute monarchism.

To him who thoughtfully reviews the progress of medical science during the opening years of this century, as I have briefly noted it thus far, it would appear that much of it was providential in the light of that which followed. Had it not been for the discoveries which had robbed malaria, typhoid fever, lock-jaw, dysentery, yellow fever, hookworm infection and the specific diseases of mankind of much of their terrors, one would stand appalled and aghast at the mere thought of what might have happened to the millions of soldiers of all lands, to say nothing of the famished and insanitary populations of the war-ridden countries of Europe and Asia. As it proved, the work of these heroes of medicine and surgery found its supreme testing on the field of battle and in the hospitals back of the fighting-line and did not fail. Upon the substantial basis thus provided the medical corps of the world shouldered their herculean tasks and made good, to the credit and honor of the profession and to the general welfare of the peoples of the world. Glancing cursorily over the medical and surgical advances of the past five years (1914-1919), some salient and suggestive facts will be noted.

From the standpoint of the pathological laboratory, probably the most remarkable and startling development of the war was the wide-spread destructive action of the blood-dissolving streptococcus (*Streptococcus hemolyticus*), which was responsible for most of the deaths resulting from pneumonia during and following the dreadful

epidemics of measles and influenza. And as yet, I regret to say, no serum or vaccine or antitoxin has been devised to successfully combat the pernicious action of this most virulent germ. We all realize, of course—as who does not?—the gravity of that terrible pandemic of influenza that rolled irresistibly over the land from the navy-yard at Boston harbor, where it started on August 28, 1918, until it reached the coast-line of the Pacific, carrying away in its devastating progress nearly 500,000 of our population; that same scourge which, in its passage around the world in less than a year's span, swept six million souls into eternity; but do we realize that the epidemic of 1918 was the worst influenza epidemic in history, as Vaughan and Palmer have noted? And this notwithstanding that "in the last 800 years there have been 28 pandemics or world epidemics and about 72 additional widespread and fairly distinct waves of the disease." More than one-third of the entire population of this country contracted the disease last year, and of those attacked, as I have already mentioned, nearly half a million perished. Vaughan and Palmer¹, writing on communicable diseases in the United States army, say that "the plague epidemic of 1665 in London killed 14 per cent of the total population. The yellow fever epidemic of Philadelphia in 1793 killed 10 per cent of the population. Third in severity was the influenza epidemic in 1918 at Camp Sherman, where 3.1 per cent of the entire population died in seven weeks from influenza and pneumonia. In the combined United States army camps during four months 1.5 per cent of the population died." This outbreak stands as fifth in rank in Vaughan and Palmer's list of deadly epidemics; but, as Evans has indicated, "none were listed by these investigators except epidemics in the better known parts of the world—regions where statistics are somewhat reliable and obtainable. The ranking would have been different had epidemics among the less civilized peoples been taken into account." In Philadelphia, the worst hit city in the country, the epidemic destroyed .77 per cent of the entire population in seven weeks; in New York, .39 per cent. The figures for the entire country are generally given as .45 per cent. The fatality

rates were more than three times as high as in the epidemics of 1890 and 1891. Various statisticians are agreed that more people died from influenza-pneumonia in 1918-1919 than died from the same disease in all four of the years between 1890-1894 (*Evans*). About 84 per cent of all the deaths from disease in the United States army between September, 1917, and May, 1919, were due to influenza-pneumonia-bronchitis (*Evans*).

This most virulent form of pneumonia, in which the patients seemed to literally drown in their own serum, was, probably, the most terrible pathologic feature of the war-period. It was noted particularly during the great influenza epidemic of 1918 and after the measles epidemic in the army in 1917-1919. It is interesting to note, in this connection, what Vaughan and Palmer record as to contagious diseases in the army. They state that measles was 19 times as prevalent in our training-camps as in civilian life, and that the pneumonias were 12 times as prevalent in the camps as in the civilian population. Meningitis was 45 times more prevalent in the camps than in the civilian population; scarlet fever, 6 times as prevalent, and diphtheria twice as prevalent, while typhoid fever and its allied diseases, including dysentery, were negligible. Tuberculosis, on the contrary, was 13 times more prevalent among civilians than among soldiers. This was due mainly to the elimination of tuberculosis in the examination of the drafted men, coupled with the healthy outdoor life which the soldiers are compelled perforce to live. Here we have a virile argument in favor of universal military training.

So far as is known, the great war developed but two entirely new diseases. Trench fever first appeared among the English troops shortly after their entrance into Flanders. While not a fatal disease, it became so prevalent that it incapacitated a large percentage of the men, and therefore became a serious menace to the army. It was not until our own Research Committee, headed by Major Richard P. Strong, of our Army Medical Corps, in December, 1917, began an experimental investigation of this disease that its causation and pathology became known. This committee ascertained beyond doubt that trench fever is a specific, infectious disease transmitted

1. Vaughan and Palmer: *Jour. of Laboratory and Clinical Medicine*, July, 1919.

by the bite of the body-louse. This was an important finding, for the disease was causing a tremendous loss of man-power not only in the British army, but in all armies engaged in the war. At once an active campaign was instituted for the destruction of vermin and by the time of the armistice the results of this prophylaxis were beginning to be felt. Today, energetic steps are being taken the civilized world over to destroy vermin of all kinds, including rats, mice and lice.

Lethargic encephalitis, popularly known as "sleeping sickness," first appeared, according to Flexner², in Vienna and neighboring parts of Austria, in the winter of 1916 and in the United States in the winter of 1918-1919. It is a disease affecting especially the gray matter at the base of the brain and the tissues of the spinal cord. It may produce paralysis of the ocular, facial and other muscles. The disease occurs with extreme abruptness and shortly presents the most characteristic symptom, marked lethargy or drowsiness, which is progressive in character and present in about 80 per cent. of the cases. This stupor may persist for a few days only or it may last for months. In patients who recover, the return to clear mentality is, as a rule, gradual. The disease occurs at all ages and is about equally common in both sexes. It has a high mortality (20-40 per cent). It is most prevalent in the winter season. It is undoubtedly infectious in nature probably through the secretions of the nose and throat, but nothing whatever is known as yet as to its precise bacterial causation.

While it is true that trench fever and "sleeping sickness" comprise the only new pathological entities developing during the war, and were thus added to our knowledge of the diseases that mankind is heir to, there was much that made for real progress in all the various branches of medical and surgical science during that epochal period. Time would fail me were I to speak in full of the advance made in the management of shell-shock, a condition which we now know is nothing more nor less than a manifestation of grave hysteria and a sign of a depraved nervous system; of the wonderful results following the paraffin treatment of burns; of the development of the therapeutic management of gassed patients; of the excellent clinical results obtained

after nerve-splicing and nerve-transplantation for the relief of traumatic paralysis; of the advances made in the management of surgical shock; of the new uses for physical methods of colored lights, and of the marvelous development of the x-rays in so far as their practical application is concerned. One great lesson was learned by all who had the privilege of active service in the armies of the world, namely, that war surgery differs in no respect from ordinary civil surgery in so far as the general principles of technic and of asepsis and antisepsis are concerned. Only in the multiplicity of the wounds encountered and in their unusual sites and characteristics is a difference to be noted. Thanks to the labors of Dakin in the chemical laboratory and to the practical application by Carrel of the Dakin fluid to poisoned and unclean wounds of all kinds, an astonishing amelioration of septicallly infected wounds was noted. With the proper Carrel-Dakin technic aided by the trolley-system of suspending the affected limbs, pain, suppuration and swelling fled as if by magic, and in a few hours after the institution of the method those who had been rolling and groaning in agony had their wan and peaked faces wreathed in smiles of wonder and gratification. It was my great privilege to see and use this method at the Rockefeller Institute of New York City and in the septic wards of the Walter Reed General Hospital at Washington, D. C.

This advance in the treatment of sepsis is, as Armstrong³ has indicated, but one instance among many of the manner in which "the war has brought into closer daily association the surgeon and the scientific workers in the scientific departments closely allied with practical medicine and surgery. Chemists, physiologists, bacteriologists, biologists and pathologists have been brought into intimate association with the problems of the bedside. Many have for a long time felt that in our medical schools and hospitals there has been too great a dissociation between the primaries and finals, between the workers and teachers in the scientific and practical subjects. It must always be remembered that the medical work has been performed by the medical profession, and after the war they will doff their military dress and resume civilian practice enriched by their varied experiences.

2. Simon Flexner: Jour. A. M. A., Vol. LXXIV, March 27, 1920.

3. Armstrong: The Canadian Association Med. Jour., 1919.

The lessons learned during the war will be applied after the war." Armstrong believes that one of the most important and far-reaching results of the war will be a change in the methods of medical education. What the more immediate changes may be it is difficult to predict, but that both undergraduate and graduate studies will be differentiated more in the future than in the past is highly probable. "The same factory cannot turn out Ford and Rolls-Royce cars, nor can the same school turn out general practitioners, physiologists, biologists and chemists with economy of time to all. The undergraduate teaching best adapted to one intending to devote his life to preventive medicine is not necessarily the best education for the man preparing for curative medicine."

I think you will agree that this survey of the subject assigned to me would not be complete without a brief reference to the reconstruction department of the United States army. According to Dr. Frank Billings,⁴ the policy of physical and mental rehabilitation of disabled soldiers, sailors and marines, was formulated in the office of the Surgeon General of the army in August, 1917, was applied in seven hospitals early in 1918, and finally approved by the War Department on July 29, 1918. The object of this department is the restoration of these physically and mentally incapacitated men to as perfect a condition as possible. The work is defined as "continued treatment, carried to the fullest degree of maximum physical and functional restoration consistent with the nature of the disability." To this end all known measures of modern medical and surgical management have been applied, including mechanotherapy, electrotherapy, massage, reconstructive wound-healing, mental occupation for the cure of shell-shock, and the teaching of various arts and trades to the disabled soldiers. The educational program embraces courses in technical, agricultural and commercial subjects. Says Dr. Billings: "Many disabled soldiers who were qualified aided in the training of their fellow patients. Civilian women worked as reconstruction aides in giving courses in the arts and crafts and commercial studies. A director of sports, games, gymnastics and military drill supervised these branches, in coöperation with the American Red Cross, Young Men's

Christian Association, Knights of Columbus, Jewish Welfare Board and Salvation Army. Special buildings, gardens and fields have been utilized for the purpose of training convalescents in workshop and academic courses and in agricultural pursuits. Equipment for shops, schools, physiotherapy and gymnasiums has been supplied. Needful books have been furnished by the American Library Association." At the height of this work forty-seven reconstruction hospitals were functioning. This number was later reduced to forty-four general and base hospitals in which the work was carried on and this number was gradually reduced as the number of patients diminished. After July 1, 1919, the work was concentrated in nineteen hospitals, and today there are only fourteen or fifteen of these in active operation. After the signing of the armistice convalescent camps were established in various parts of the country where the soldiers received the final hardening and curative processes by means of setting-up exercises and military drill. Necessarily, this course of treatment involved in many instances a prolonged retention of the soldiers who naturally chafed under the restriction and longed to return to their homes. One can sympathize, therefore, with the colored soldier who accosted a Red Cross visitor in one of these Army Reconstruction Hospitals with the query: "Say, boss, what is they keepin' me here in this hospital fer—a souvenir?"

The results of this unique move in the history of war-medicine have been gratifying to the utmost. Dr. Billings states that "in spite of almost insurmountable difficulties it is believed that physical reconstruction of the soldiers has been of the greatest value in maintaining discipline, in the promotion of morale, in the diversion of the soldier's mind from his disability, in the arousing of his interest in education which would overcome his handicap and in securing a physical and functional restoration of power. Often the patients have been enabled to take up a more lucrative profession than that which they held formerly, and the men have been stimulated to take further training with the Federal Vocational Board after discharge from the army."

Such briefly is a resumé, necessarily fragmentary and incomplete, of medical and surgical progress during the period of the world war. Enough has been mentioned, however, to prove that the

4. Frank Billings: *Jour. Am. Med. Assoc.*, July 12, 1919.

medical profession has not lain dormant during these cataclysmic years but has nobly upheld all its traditions and has been alert and active, coöperating with its sister sciences for the welfare of the race. It is too early as yet to fully realize the value of the progress that has been made, but that it has not been inconsiderable and negligible even a cursory glance will convince.

And now, ere I finish, may I be permitted to dream for a moment? We are at the close of the greatest war that history has ever recorded. The smoke and grime have not yet cleared away. Nations are still fighting and others are quarreling. The earth still shakes and the air rumbles with the sullen roar of the iron-throated voice of Mars. But man is tired of it all and is turning longing eyes toward the quietness of "peace on earth and goodwill toward men." Is history about to repeat itself? Are we on the eve of a great literary renaissance, such as that of the fifteenth century and that which followed the war-storms that convulsed Europe in the early portion of the sixteenth century? Out of that bloody turmoil emerged the glorious Elizabethan period of literature marked by famous names—Spencer, Shakespeare and the rest. And out of the roar and slaughter of the Napoleonic wars sprang the still greater literary period—the Victorian era of wonderful and inspiring literature which, save for a few rare volumes and still rarer incunabula, practically comprises the libraries, public and private, of today. This era, as we know, gave way to the mechanical and scientific period which persisted up to the breaking out of the war and was characterized by a notable dearth of good literature. Now, as the smoke and din and havoc of this last great Teutonic eruption, the greatest and most formidable of them all, are sullenly dying away in the narrowing vista of the past, will a new and it may be even greater literary period slowly arise from the ashes, the phoenix of a happier day for all mankind? Who can say? This we know, that it has ever been so. It seems to be the natural reaction from disorder, convulsion, pillage and death to the peace and quiet of the library and the fireside. Those of us who survive into the decades to come may gloat over the literary marvels of famous men now unknown and unread. It may be the Georgian or post-Georgian period

of brilliant literature is at hand. If so, may it be our blessed privilege to revel in it—at least for awhile.

THE PHYSICIAN AS A CITIZEN*

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War upon the "Intellectuals" is not confined to Russia nor yet to the battle-scarred nations of Europe. Bolshevistic manifestations are not entirely wanting in our own, the most favored nation of all times. The traditional premium on brains has become largely a myth. The hod-carriers' union commands more consideration than does the County Medical Society.

A carpenter's income based upon an equipment of a modicum of training together with an armamentarium of a saw and a hammer puts to shame the pecuniary compensation of a college professor. The profession of medicine is coming to be more and more discredited as a means to a decent livelihood. Laws discriminate against physicians. In the settling of an estate a long list of preferred claims takes precedence over bills for medical services. In personal injury cases a claimant may not settle without the consent of his attorney but the laws afford no such protection to his physician.

In industrial cases the law confers upon the employer the right to select the physician, withholding from the injured employes their natural right to have a voice in the selection of the medical attendants into whose hands their welfare is committed.

State officials are seeking, through annual re-registration, to number and tag the physicians in order that the profession may be still further subordinated and subjugated and the aforesaid state officials become correspondingly more influential and more important politically.

"Uplifter" societies are everywhere combing the community for charity work which physicians are expected to perform. Medical relief to the poor is directed by laymen on salary, while the work is done by physicians gratis.

Educational prerequisites to the practice of medicine by reputable physicians now cover nineteen years of instruction and training, whereas

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quacks and charlatans are permitted greater privilege with next to no educational or moral qualifications; and one particularly pernicious group is specifically exempted from all supervision and restriction, while its own self-imposed conditions are limited to these, namely: A mental twist and an insane desire for money.

Public officials give ear to the voice of organized labor but frown down the solemn declarations and formal requests of organized medicine. The union man who patronizes only union shops and uses only union-made materials never thinks to inquire as to whether or not his physician belongs to the medical society.

Always and especially in its times of peril the nation depends vitally upon its physicians, and always and especially in its times of peril, the nation's trust and confidence in its physicians have been justified by their achievements, yet the national congress passes laws oppressive to physicians and favorable to the vendors of patent nostrums.

In many ways the physician is the most conspicuous and the most important citizen in every community, yet in other ways, and these other ways include the conditions which dominate his economic affairs, the physician is the *least influential* citizen in every community. That this is true is a misfortune for the general public as well as for the physician. All citizens share the benefits which medical science has contributed to the welfare of mankind. Whenever the proper influence of scientific medicine is curtailed, to the same degree the welfare and safety of the state suffer impairment. In times of war no other class of citizens in the percentage of its numbers or in the efficiency of its service to country equals the medical profession. In times of peace no other class of citizens counts for so little in the everyday affairs of men.

Law-making bodies pay scant attention to sets of resolutions adopted by medical organizations in annual session. No political consideration is shown to expressions of sentiment unless such expressions of sentiment influence elections.

The medical profession lacks solidarity in organization and breadth in purpose. No other class of citizens is qualified to deal with health problems, no other class of citizens should be permitted to dominate health legislation.

The injustices, inequalities and discriminations which political bodies have contemptuously

heaped upon the medical profession and which have reacted hurtfully upon the public will be promptly and fully corrected just as soon as the medical profession calls into activity its potential political power. By political power is not meant ordinary partisan politics. The potential political power of the medical profession is neither republican nor democratic, nor does it reside in a new party, but is a moral force to be exerted regardless of partisanship. This wholesome political influence must be exerted by physicians through organization. The traditions and ideals of the profession will not be compromised nor abandoned—rather will a broader and more lofty purpose be attempted.

The advent into the political field of so large a body of citizens characterized by the high degree of culture and intelligence which physicians as a whole possess, will tend to eliminate certain elements that should have no part in public affairs. The medical profession is lacking in moral courage if it continues to surrender to a lower stratum of society the high privilege of controlling the momentous affairs of government.

The well-known hazards of the physician's life in times of peace, as well as in times of war, are conclusive proof that physicians are not wanting in bravery, in fortitude, nor in heroism.

What, then, is the physician's duty as a citizen for his own sake, for the sake of his family, for the sake of his profession and for the sake of society? The plain duty of the physician as a citizen is to assert a broad citizenship, which must include a wholesome and effective political influence. This political influence, in order to be wholesome, must not be partisan. This political influence in order to be *effective* must be exerted through medical organization and above all *it must be carried to the polls*.

The time is ripe for a movement of this kind. Legislative ills are pandemic. Self-preservation demands that the "rank and file" of the medical profession wake up—and when the awakening does occur the way of the quack, the charlatan and the medical parasite in religious cloak will indeed be hard.

Then will come a single standard of qualifications for practicing the healing art. Then will the health and lives of human beings receive at least as much consideration at the hands of state legislatures as is now accorded to the health

and lives of hogs and cattle. Then will the health and lives of working men rank in importance with the health and lives of their employers. Then will medical charity be dispensed by justly compensated physicians. Then will come an end to the wholesale sacrifice of the lives of helpless little children upon the altar of sordid greed—under the cloak of religion. Then will murder by neglect through fanaticism be recognized as such in Wisconsin, in Illinois, and in Iowa, as it is now recognized in New Jersey.

And through it all, and above it all, the medical profession will have advanced on its way toward a higher and a better citizenship.

Note: See Organization Plan on page 446.

A PROTEST AGAINST ALLOWING HYSTERIA, HYPOCRISY AND COWARDICE INFLU- ENCE THE SETTLEMENT OF MEDICAL QUESTIONS EFFECTS OF ALCOHOL

Dr. C. S. Potts, in the New York Medical Journal, April 3, 1920, while not attempting to say anything good of the use of alcohol as a beverage, endeavors to show that statements of its bad effects on the human race are exaggerated. He also protests against allowing hysteria, hypocrisy and cowardice to influence the settlement of medical questions. It has long seemed to him that if alcohol was nearly as potent a factor in causing mental and physical deterioration as is claimed by many, by this time the world should be peopled almost entirely with physical and mental weaklings. Therefore, the world, instead of progressing as it has, should have gone backward, and the average length of life should be much less in spite of the increase in knowledge and skill in the treatment of disease. Potts believes that most of the indictments of alcohol are based on the results of laboratory work and the study of statistics, and that such evidence is often fallacious and not consistent with actual experience. Potts gives biblical, historical and biographic references to prove his point that alcohol does not cause mental and physical deterioration. Speaking on the effects of alcohol in those who do not use it and do not wish any one else to do so, Potts claims that many such are undoubtedly mentally peculiar. They exhibit a form of bolshevism in that they want to rule or ruin. They alone are right. In furtherance of their views they believe in false statement, vilification, and slander of those who do not agree with them. They refuse to believe conclusive evidence (which according to an old definition means insanity). They advocate confiscation and destruction of legally owned property, illegal exercise of police power, and they tempt people to do the things they protest against, so that they can show how wicked the world is. Potts is of the opinion that this intolerant exhibition of superiority deliberately shown by this extreme section is based on a form of egoism; it is a consequence of a psychologic

self-gratulation and self-esteem which borders on an obsession and is regarded by some authorities as pathologic. The burthen of Potts' paper is summarized as follows: That alcohol is not necessarily a deterrent to good work and to the attainment of greatness; that the world is not going backward in spite of its long continued use of alcohol, and so far as its use is concerned is in no danger of doing so; that every one who uses alcoholic beverages is not per se a drunkard and unable to do his share of the world's work. Potts does not dispute that it may be a cause of harm, both from the medical and social point of view, but it also, from the former point of view, may be an agent for good. He believes that legislation influenced by perversion of facts, hysteria, hypocrisy and cowardice is of more danger to the country than alcohol. There never was a time when common sense was more needed and never a time when it was less prevalent.—*J. A. M. A.*

STATUS OF THE TREATMENT OF LEPROSY

"The following conclusions may be drawn from our recent experience in the treatment of leprosy:

"1. The intramuscular injection of the ethyl esters of the fatty acids of chaulmoogra oil usually leads to a rapid improvement in the clinical symptoms of leprosy. In many cases the lesions disappear, except for scars and permanent injuries, and the leprosy bacillus can no longer be demonstrated.

"2. When combined with iodine, the fatty acids of chaulmoogra oil and their esters give good results; but there is no adequate experimental proof that this addition of iodine causes any increase in the effectiveness of the materials used.

"3. All of the available evidence obtained from the use of fractions of the fatty acids of chaulmoogra oil indicates that the therapeutic action is due to one or more of the fatty acids of the oil or to some as yet unidentified substance associated therewith. The various methods of fractionation heretofore employed have failed to demonstrate the active agent.

"Although conclusive evidence is not at hand, it is probable that the oral administration of chaulmoogra oil derivatives is of minor importance compared with the injections.

"5. In treating leprosy, it is important to make use of all auxiliary agencies to build up and maintain bodily vigor.

"6. Hypodermic injections of the ethyl esters into leprosy nodules are followed by marked swelling with ultimate recession of the lesions. This is a valuable auxiliary treatment for especially resistant lesions.

"Summary.—It has been sufficiently established that chaulmoogra oil contains one or more agents which exert a marked therapeutic action in many cases of leprosy. We can not say as yet that the disease is cured, since we have no test adequate to establish such a verdict. Whether or not the apparent cures are real and permanent, it is evident that we have a valuable agent at our disposal in the control of the disease."—McDonald & Dean, *Public Health Reports*.

ORGANIZATION PLAN FOR COMMUNICATION BETWEEN COUNTY MEDICAL SOCIETIES

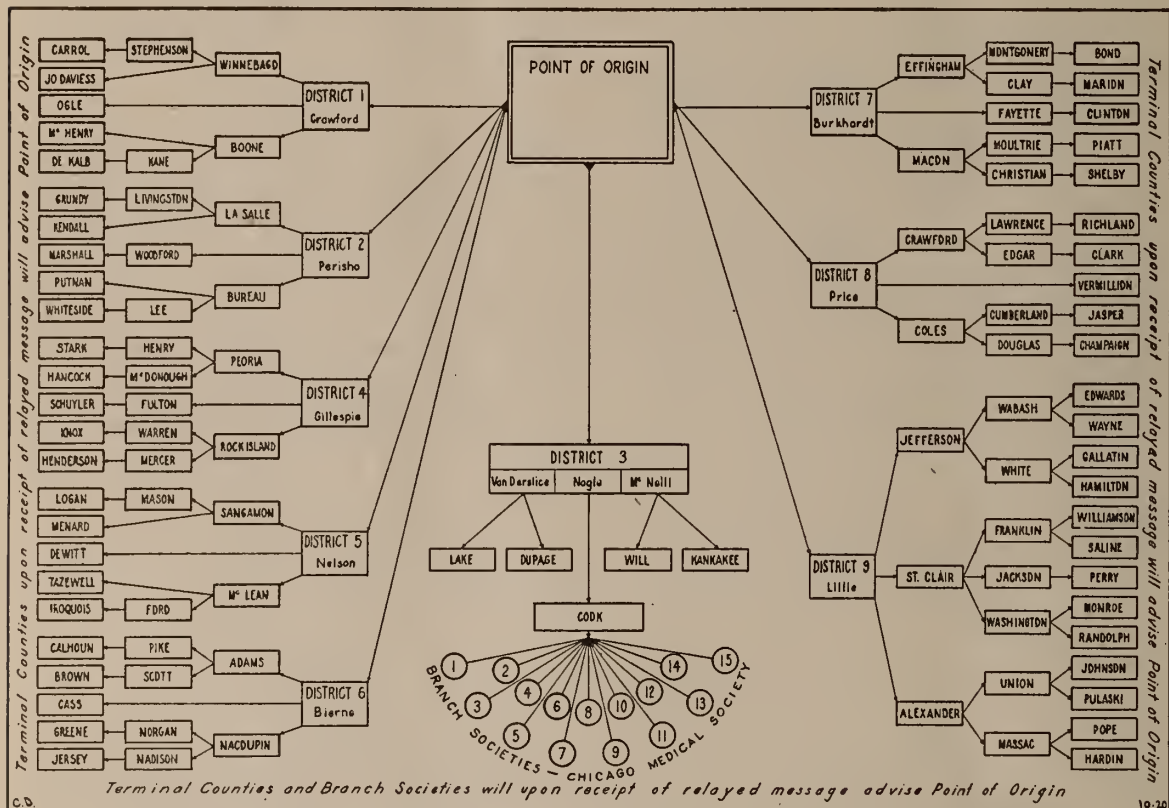
County and State Medical Societies and the American Medical Association are very well as media of scientific intercourse; as a civic force the plan, herewith presented, of inter-communication will make possible the dissemination of information on pernicious legislation, such as compulsory health insurance, birth control, coercive medical re-registration, State medicine, drugless therapy, chiropractic, etc.; for the promulgation of data in regard to constructive health legislation for the better care of the insane, defective and epileptics, diagnostic centers controlled by medical scientists, not political opportunists; and particularly as a channel of education of physicians, dentists and druggists in their rights and duties as citizens and as a counter force to the "uplifters" and false doctrinaires who have been exploiting the medical profession regardless of equity.

THE MARINES have a slogan, "If you don't know, you get killed."

Poor Richard had a proverb, "Never put off 'till tomorrow what you can do TODAY."

"A CHAIN IS AS STRONG AS ITS WEAKEST LINK." DON'T BE A MISSING LINK! DISTANCE MEANS NOTHING TO A POSTAGE STAMP.

A chat, face to face, or "over the 'phone," lends the touch of your own personality to this CAMPAIGN OF EDUCATION to safeguard our state, our people, our professions and ourselves from the menace of HYSTERIA in legislation and to secure SANE LAW for public health and the personal well-being of our citizenry.



Note: Lines indicate direction of communication from "Point of Origin" via councilor districts to counties.

The diagram shows the plan of organization adopted by the Illinois State Medical Society. It is based upon the Councilor districts. The "Point of Origin" or headquarters communicates with every County in the State through the lines shown in the drawing.

Every County has its committee of *one* whose duty, in part, is to relay whatever message he may receive to the committee of *one* in the Counties assigned to him.

A message from headquarters started out in nine different directions first reaches the nine councilor districts and is there by this chain relay system promptly relayed to every one of the one hundred and two counties in the State.

The whole State through this State Committee is thus prepared to deliver a concerted simultaneous effort for or against pending legislation. In order that headquarters may know that the system is in working order, the peripheral counties are required to repeat all messages back to the point of origin.

A message may originate at any point in the chain—that is in

any county and in due time will reach the point of origin or headquarters from which point it will be forwarded along the same lines as if it had originated at headquarters.

The advantage of this *complete organization* becomes apparent at once. A "live wire" in every county knows what to do and when to do it. When vicious legislation is threatened every member of the legislature will be able to ascertain the attitude of his constituents, if he wishes to know how the people back home stand on the question. A week end reception committee of his neighbors can help him make up his mind how to vote in order to further the best interests of the people he represents.

This plan has proven effective in New York—see a communication from Dr. J. J. A. O'Reilly in the ILLINOIS MEDICAL JOURNAL for July, 1920. This plan will certainly improve matters in Illinois where a handful of well organized quacks have pretty much had their own way in matters of health legislation.

ILLINOIS MEDICAL JOURNAL

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State society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

Send original articles and all communications relating to advertisements to Dr. Charles J. Whalen, Editor, 4647 Dover Street, Chicago.

Membership correspondence to Dr. W. H. Gilmore, Mt. Vernon, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 927 Lawrence Avenue, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

NOVEMBER, 1920

Editorial

REPUBLICAN OR DEMOCRAT—PHYSICIANS SHOULD TABOO PARTY POLITICS

Doctors should be more patriotic than partisan at elections. Doctors, like all others, should first

of all vote as Americans, passing upon the issues that come before the American people solely with regard to the question whether they served the highest aims and ideals of Americanism. It is possible that in some elections party and patriotism may appeal to the same loyalty; this is especially true in national affairs. At other elections a strict party vote in some instances can be construed as nothing less than disloyalty to the public as well as to the profession.

Self-preservation is one of the first laws of nature. Medical men must stand together. The organized profession must have a clear-cut platform on things medical and must not hesitate to back it whether it is unpalatable to either of the old parties and their candidates. In the new order of things there is no longer to be considered the question of party brand. The slogan for the future should be: Does the candidate stand for radical medical legislation which is always un-American, destructive alike to the interests of the people and the profession. The editorial in this issue on the California and Oregon situation shows the general trend of the times in medical legislation. We ask you to read it carefully.

A candidate's views on national issues by no stretch of the imagination can be construed as fitting or unfitting him for office in a municipality or state or for membership in his respective legislature, but it is of vital importance to the people and the profession what views he holds on questions like the following:

Compulsory Health Insurance. (Medicine subordinated to politics.)

State Medicine. (Medicine degraded.)

National Socialization of Medicine. (Medicine demoralized.)

Coercive Re-registration. (Judicial power of revocation without judicial responsibility.)

Drugless Therapy. (Chiropractic—57 varieties of charlatans.)

Administrative. (Tin badge not judicial warrant for right of search; alcohol and narcotics.)

All these are issues that reach into every home in the land, issues that enter into the daily life of man, woman and child and touch every human activity.

They group together into one great issue, which is: Do we go forward or do we go backward?

The welfare of the profession and the masses

of our people is knitted and woven into the fabric of the campaign against bolshevism and destructive foreign propaganda financed and fostered by agents of destruction.

Forces of reaction are making every effort to defeat the forces that stand for progress and for justice, and that hold forth the best hope for equal opportunity in our country.

The ideals for which we strive are not impossible of accomplishment, if we will wage a constructive fight against the election of any candidate for the legislature or for other office who is in sympathy with destructive propaganda.

To substantiate our contention we point to results obtained by the Professional Guild of Kings County, New York. This is an organization of physicians, dentists and pharmacists into a compact professional protective association, with working committees in each assembly district.

In this organization personal political preferences are forgotten, the three professions directing their fire against all candidates, democrats and republicans alike, who express themselves in favor of compulsory health insurance and allied bolshevik schemes or who refuse to make known their position on these questions.

The physician and dentist in contact with his patient and the pharmacist with his customer, urge them in their own interest to aid in conserving the higher professional standards and professional efficiency of the doctor, dentist and pharmacist by voting against the candidates who favor such schemes as the guild may determine as obnoxious.

As a result of this concerted campaign twenty or more candidates unfriendly to the three professions were defeated in New York last year.

The doctors in Sangamon County, Illinois, are in the present campaign operating under the new slogan "Physicians should taboo party politics." The Sangamon County Medical Society in their fight on the republican candidate for coroner (a Christian Scientist) have issued a card containing educational data, the headline of the same being "Republican or Democrat: We ask you to vote for the Democratic candidate for coroner." The doctors have entered into this fight with the right spirit. The Republican members of the society are putting forth their utmost energy to defeat the candidate whose faith teaches there is no such thing as disease and

death and who for this reason is unfit to sit as final arbiter in cases where the cause of dissolution is in question.

IS THE MEDICAL PROFESSION BEING AGAIN DOUBLE-CROSSED BY THE OFFICIALS OF THE A. M. A.?

A story is told of a lawyer who wanted to get a witness squarely on record on the subject of miracles. Said the lawyer, if a man falls from the roof of the Masonic Temple, strikes the ground, gets up, dusts his clothes and walks off unhurt, what would you call that? "An accident," was the quick response. But, persisted the lawyer, if he climbed up the roof a second time, fell off, struck the ground and got up unhurt, what would you call that? "A coincidence," was the reply. But, urged the lawyer, if he went up a third time, fell off the roof, struck the ground and arose unhurt, what would you call that? "A habit," retorted the witness, and the lawyer gave it up.

When a chairman of the council on Health and Public Instruction of the A. M. A. appointed as executive secretary of a committee to study impartially and report on Compulsory Health Insurance an advocate of the plan for over a dozen years, some were charitable enough to call it an accident. When a second chairman continued to send out the propaganda of this executive secretary after he had been dismissed, some still charitably inclined thought it might be a coincidence. But now comes along another chairman who is preaching the beauties of the twin sister of Compulsory Health Insurance "Yours for health—State Medicine," we feel that it has become a habit with these chairmen of the council.

Dr. V. C. Vaughan, Dean of the University of Michigan Medical School, and chairman of the council on Health Public Instruction of the A. M. A., can not say, as did his predecessors, that the House of Delegates had taken no action on the subject. He knows the character of the resolution adopted at New Orleans, he knows the feeling in his own State of Michigan as shown in the resolution condemning Compulsory Health Insurance, State Medicine and kindred schemes; he knows the character of the report and the resolutions of the Michigan committee on civic and industrial relations and he knows that the rank

and file of physicians are bitterly opposed to the measures he is advocating.

When he arose at the annual meeting of the Michigan State Society last Spring and said that he was a failure as a practicing physician, men thought he was overmodest. When he added that real medicine is confined to preventive medicine, they thought perhaps he was not quite so modest and when he stated that the way to bring the boys and girls back in droves to the farm was to establish a hospital at every cross roads, they stopped thinking and just wondered.

We do not question Dr. Vaughan's right to his personal opinion on this subject of State Medicine. It is his right and his privilege to think that practice of medicine is a waste of time and folly, but as chairman of the council on Health and Public Instruction of the A. M. A. he has no right to take a position which is diametrically opposed to the stand of the House of Delegates; as chairman of that council he is not privileged to preach a doctrine to which the overwhelming majority of the profession (to quote Dr. F. R. Green, secretary of the council) are opposed. If he is so firmly wedded to his beliefs in the saving grace of State Medicine, it is Dr. Vaughan's duty as it should be his privilege to resign from the chairmanship of the Council on Health and Public Instruction. If Dr. Vaughan can not see the light, it should be the duty of the Board of Trustees to ask the gentleman for his resignation and if the Board of Trustees have not red blood enough in their makeup to do so, it is then the duty of the House of Delegates to elect new trustees who are in touch with and have some sympathy for the rights of the profession at large.

It is time the rank and file of the American Medical Association asserted itself and cease permitting its appointees, however high their rank or however high their aspirations (though it be the president's cabinet) to preach doctrines that will place the medical profession in bondage.

If things do not take a turn we will have a revolt in the ranks of physicians. The rank and file are sore; sore at the leaders; sore at the policy of their journals. If men who are unafraid, men with vision, men with the sense of justice and the eternal fitness of things do not come to the front we can see the decline and fall of the great American Medical Association. This may sound a little strenuous but it is true nevertheless.

As we said in a previous issue, if the A. M. A. does not at once disassociate from the management or direction of its committees, the men who admit they have been failures as doctors, the soviet government propagandists, the practice of medicine by university advocates, and the other fifty-seven varieties of near doctors, and appoint in their stead men who are closely in touch with the needs of the profession, the officers are not fulfilling their duty to the membership.

Our familiarity with the sentiment of the profession throughout the United States prompts us to say that the rank and file of physicians of this country are determined to make the A. M. A. an organization on the Lincolnian lines "of the profession, for the profession and by the profession" or, to paraphrase Lincoln's words, "For the people, by the people, that the A. M. A. may not perish."

PRESIDENTIAL CANDIDATES AND THE MEDICAL PROFESSION

In order that the medical profession might be correctly informed as to the attitude of the presidential candidates on matters of vital importance to the health welfare of the people as well as to ascertain the disposition of the candidates towards Health Insurance and other socializing schemes, we wrote the secretary of the Ohio State Medical Society early in July for data along lines mentioned.

July 16, 1920.

To the Editor—Replying to your inquiry concerning the presidential candidates on Compulsory Health Insurance, State Medicine and other radical proposals, I believe it can be safely assumed that neither of the candidates would personally advocate anything as radical as State Health Insurance. After enumerating the relationship of both candidates with members of the medical profession, the letter wound up by saying "I am quite sure that the gentlemen named will use their influence to prevent Compulsory Health Insurance or measures of similar intent."

Lulled to a feeling of security because of the contents of this letter, nothing further was done in the matter until September 18, when a letter touching upon these vital questions was sent to both candidates, together with several copies of the ILLINOIS MEDICAL JOURNAL containing several editorials bearing on the same subject to

which, under date of September 21, the executive secretary of Governor Cox simply acknowledged the receipt of the letter and Journals.

Under date of September 22, Senator Harding replied as follows:

To the Editor: I have your letter of September 18, noting the sending of the copies of the Illinois Medical Journal for March, May and June.

I shall be glad to read the editorials to which you direct my attention when these numbers come to my desk and when my somewhat crowded time permits.

In the meantime let me say that with a purpose which you avow of opposition to the extension of autocracy and bureaucracy I am in very hearty sympathy.

Very sincerely,

W. G. Harding.

Nothing further was heard from either candidate until October 20, when Dr. H. J. Achard, associate editor of *Clinical Medicine*, wired both candidates for the presidency regarding their position on the question of Compulsory Health Insurance and allied dangers. Unfortunately, Senator Harding being away from home, did not act on the inquiry. Governor Cox, however, replied by night letter as follows: "I strongly favor a plan of health insurance and am working to that end in our State. Have caused an investigation to be made so that the legislature may act with complete information. It has also been my policy to give full recognition to the ethics and needs of the medical profession in so far as contact with the State government is concerned."

Editorial *Clinical Medicine*, November, 1920.

We are sorry that the matter of ascertaining the attitude of the candidates was not started sooner and that the atmosphere in regard to these important problems was not a little more clarified.

Next time, perhaps, the medical profession will be thoroughly organized so as to more effectively wage a campaign for or against certain candidates.

GUBERNATORIAL CANDIDATES AND THE MEDICAL PROFESSION

Immediately following the September primaries we wrote the three principal candidates

for Governor—James Hamilton Lewis, John Maynard Harlan, and Len Small—under date of October 1, as follows:

Dear Sir: As a candidate for Governor we feel you are interested in the public health problems of the State of Illinois.

If you care to express your attitude on things medical the columns of the ILLINOIS MEDICAL JOURNAL are open to you.

Thanking you for your kind consideration of the matter.

Very truly,

To this communication neither Mr. Harlan nor Mr. Lewis saw fit to reply up to the time of going to press for this issue. On the other hand Mr. Small, under date of October 15, sent us the following letter and statement:

Kankakee, Ill., October 15, 1920.

To the Editor: Replying to your letter of the 1st inst., I enclose herewith a statement signed by me and addressed to the doctors of our State, which I would be very glad to have you publish in the columns of your Journal.

Thanking you for the opportunity thus given me for expressing my views, I am

Yours very truly,

Len Small.

To the Doctors of Illinois: In view of my candidacy for Governor I am sure that every doctor in our State will be interested in knowing my position on certain questions which intimately affect their great profession.

Having been reared in a medical atmosphere, my father being one of the early graduates of Rush, I believe I have a sympathetic appreciation of the problems and perplexities which confront the medical profession. I am in favor of the following policies, to be effective in the event of my election:

1. Maintenance of all institutional, public health, medical and nursing services at the highest point of efficiency consistent with public welfare and the rights of the profession; freedom from embarrassments of political influence; maintenance of standards which will inspire public confidence, assure co-operation of the several professions concerned, and command respect of the progressive states;

2. Administration of the several state departments dealing with medical, nursing, institutional and health services in such manner as

to assure harmony and co-operation between all concerned;

3. In determining policies affecting these services I shall consult and advise with all interested organizations and individuals so that these policies may be in accord with scientific practice and the best interests of the people; I shall welcome suggestions from all;

4. A reasonable degree of decentralization of federal and state administration, pledging myself to support legislation to this end. As an advocate of home rule I am naturally opposed to any attempt of the federal government to exercise public health functions which properly fall within the police powers of the State;

5. Opposition to present attempt of the Federal government to apply war-time powers and regulations to peace conditions;

6. Opposition to all radical medical or social measures that violate individual rights and endanger public health and welfare;

7. Equal requirements for the exercise of equal privileges and special privileges for none;

8. Factional, sectional, individual or political influences *will not* be permitted to interfere with efficient administration or the best interests of the State as a whole.

I have been honored with the Republican nomination for Governor. If elected, I will have no enemies to punish. I promise a square deal to all. My greatest ambition as Governor will be to give an administration which will be recognized *throughout* Illinois and the nation as second to none in points of efficiency, economy and constructive accomplishment.

May I count on your active support?

Respectfully,

Len Small.

SOME PHYSICIANS FIND A "HOLIER THAN THOU" CODE OF ETHICS A VERY COMFORTABLE STORM SHIELD

According to the Century Dictionary "ethics" is the doctrine of man's duty in respect to himself and the rights of others. Is it not time that some of the "Holier Than Thou" in the medical profession get down out of the clouds and take their place among men and in the future apply the golden rule? We believe with

Mr. Lincoln "You can't fool all the people all the time," and in the long run right prevails.

There is a class of men in the medical profession who assume the position that the "king can do no wrong"—that the code of ethics was intended for the other fellow. This attitude on the part of some self-styled leaders has become so obnoxious as to be a menace to the unification of the doctors of America, a situation vitally essential for safeguarding the interests of the profession, and to protect it from complete emasculation and from being taken over hook, line and sinker, by the State in a general scheme of socialization.

The staff of one of the Chicago hospitals has built up an unenviable reputation for unscrupulously purloining patients from their fellows. Indeed, so notorious has this institution become that the practitioners in the section in which the hospital is located zealously refrain from calling into consultation members of the staff. As a very prominent physician truthfully stated, the reputation of this staff is such that it made possible the building and the subsequent success of a certain other hospital.

Eminent doctors high in the councils of our great national organization, it appears, are not immune from violating the so-called code of ethics. Recently our attention was called to a case where a very eminent surgeon was attending a seriously sick patient. The family suggested having the opinion of another doctor, to which the attending surgeon consented, and he was handed a list of six surgeons from which to select a consultant. The attending surgeon, thinking he was doing a favor to a certain one of the group, suggested his name to the family. The consultation was held and, much to the surprise and chagrin of the family surgeon, the consultant forthwith made arrangements to take the case for operation and subsequent care. This same unethical offender within a short time thereafter, was permitted to see a case in another hospital and, with the same promptness displayed in the previous case, he made arrangements to transfer the patient to his own hospital for operation. When members of the staff of the hospital from which the patient was purloined suggested that the attending surgeon prefer charges with the Ethical Relations Committee, the aggrieved surgeon claimed he was afraid to do so because

of the official connection of the gentleman with the A. M. A.

Recently one of our prominent physicians was charged before the Ethical Relations Committee of a County Medical Society with improper conduct towards a fellow. The unethical act with which he was charged was that he had secretly arranged for room and operation in his own hospital without proper understanding with the previous physician. At the trial he admitted the corn (as the saying goes) but justified the act on the ground that the patient might or perhaps would have gone to a fee splitter. This to us is a new interpretation of the principles of ethics. Perhaps it is a new code with which we are not familiar. As yet we have not been shown a recognized code of ethics in which the performing of an unethical act is justified in order to prevent a similar violation of the code by another person. In every-day phraseology it is a "kettle calling pot black." The same line of reasoning could be argued in defense of a hold-up man who, after hitting a fellow-being over the head and taking his money, would argue in justification that the victim might or perhaps would have loaned the money to some individual who might not return it.

In all fairness we ask, have the principles of ethics adopted by the American Medical Association become obsolete? Certainly some leaders of the profession are applying rules of their own making and which are elastic enough to meet any emergency.

Even the laity is being taught that the code of ethics is ineffective. They do not hesitate to call in a strange doctor usually on the advice of some busybody friend who has some pet physician he wants to favor, and they have no trouble whatever to get another practitioner to step right in and take the case regardless of the propriety of calling on a patient in the absence of the attending physician.

We have another class of medical men who roam about in the medical world seeking whom they may devour and who seem obsessed with a malicious desire to belittle and cheapen a competitor without compunction. They never turn down a call regardless whose patient it may be and without exception deliver the fatal uppercut to the family physician when he is not present to defend himself. With a hypertrophy of the ego attitude they impress upon the family the

importance of their personal attention; "that perhaps the other doctor is all right, so far as his limited ability goes, but I am one of the 'wise men of the East' and under my personal supervision there is no doubt of the outcome. We will take the patient to 'my hospital,' where I can give her better service and keep her under observation for a few days." This is an every-day experience. This confidence game is not operated exclusively on the general practitioner; the epidemic has reached the stage where it is being done by certain specialists on fellow specialists. In the latter situation the excuse of superior wisdom can not be offered in mitigation for in a goodly per cent of the instances the aggrieved party in the estimation of their fellows is much abler than the men who are resorting to "road agent" methods.

CHRISTIAN SCIENTISTS AND THE CORONER'S OFFICE

We are informed that in Sangamon County, Illinois, one T. C. Branson, a Christian Science "undertaker," is a candidate for Coroner on the Republican ticket.

To us the situation is one of gross hypocrisy. Ma Eddy and the high priests of Christian Science teach that there is no such thing as disease and death—that what mentally balanced people call disease and death is only "error."

Not only is this (numerically few) but noisy minority known as Christian Science trying to dictate all sanitary public health and life-saving legislation, but they are now out after the Coroner's office which is the final court of appeals when the question of the cause of a death is in controversy.

In no civilized country so far as we can ascertain is "error" a legally recognized cause of what is today accepted as death. In all fairness we ask how is an orthodox Christian Scientist conscientiously going to live up to the requirements of his oath of office when at heart he believes there is no such thing as death? Yet the law compels him to certify that one or more of the recognized diseases given in the United States census classification was the cause of the demise of the individual in question.

As we go to press we are informed that the Sangamon County Medical Society, together with the dentists, druggists and nurses of the

county, are working energetically in a campaign of education among their patients and patrons in an effort to defeat Mr. Branson. As a result of this activity the politicians are sitting up and taking notice.

From the standpoint of the welfare of the community, we believe it would be "Error" for the people of Sangamon County to elect Mr. Branson.

GOOD ADVICE WHEN DEALING WITH INSURANCE COMPANIES

The contract practice committee of the Chicago Medical Society advises members not to engage in telephone conversation in relation to fees.

Insist that communication be in writing so that in case of suits the committee will have a record of attempt to reduce just fees.

Contract Practice Committee,

Thomas P. Foley,
Chairman.

Note: We are reliably informed by one of our friends, not a thousand miles remote from Chicago, that insurance companies have sent word to their agents to write no more letters pertaining to physicians' bills. We are confident that the energetic Contract Practice Committee of the Chicago Medical Society is in no small measure responsible for this edict. More power to their strong right arm!

CHANGE IN HEALTH ADMINISTRATION METHODS IN RECENT YEARS.

During the last twenty years much change has been made in the matter of health administration. To-day in every city, village and town there will be found a health officer who keeps track of birth and death records, supervises contagious and infectious diseases, safeguards the sanitation of homes and arranges for the physical examination of school children.

In America registration of births, deaths and marriages is not as it should be; the registration area is far from covering the entire Union. Remedying this effect is one of the great needs of our economic system. There should be proper registration of all vital statistics, likewise registrations of all contagious and infectious diseases to the end that supervision of all may be brought

about and that industrial diseases may be better understood and controlled.

Two decades ago few cities had municipal laboratories. Now every municipality of importance maintains a laboratory for the purpose of detecting bad milk, impure water, the examination of sputum and cultures taken from the throats of children; the examination of blood for typhoid fever, smears for gonococcus, investigation for diphtheria, typhoid, typhoid carrier and other diseases, a knowledge of which is essential in combating disease and death.

Another development of recent years is the examination of plans for the installation of sewers and plumbing in our cities. This innovation marks a very important item in progressive sanitation.

An innovation inaugurated within two decades is municipal control of public and private markets, groceries, bakeries, confectioneries, ice cream and soft drink manufacturers; the control of the milk production, not only in the cities but on the dairy farms. This latter is a conspicuous milestone in the progress of public health work. More recently we began the supplying of anti-toxin for diphtheria and tetanus, vaccination against smallpox, typhoid fever, etc., inoculation against rabies, isolation in infectious diseases, a study of pellagra, hook-worm, bubonic plague, anterior poliomyelitis. All this work has great significance and indicates the changing conditions in public health administration.

Until a comparatively recent date there were no institutions for medical research nor could the Government or State make thorough investigations or study a situation like the recent epidemic of poliomyelitis in New York. Ten or twenty years ago in many communities to isolate a child suffering from diphtheria, measles or whooping cough and to place the house in quarantine was considered almost an impossibility, for the reason that it would violate public sentiment.

To-day a health officer goes ahead, quarantines, isolates and uses various immunizing sera and vaccines and there is little if any protest except among the membership of a few drugless cults.

Due to the unselfishness of the medical profession we are rapidly stamping out many epidemics by means of sera, vaccines, biological, chemical, and chemo-therapeutic agents, for instance; the plague, dysentery, typhoid and chol-

era. We are preventing the spread of venereal diseases by various means and therapeutic agents such as drugs, isolation, education, etc.

In recent years there has been a marked movement in various parts of the country to protect from pollution our rivers and lakes from which we draw our potable water supply. This latter step marks a great epoch in disease prevention for the reason that we cannot hope to reduce morbidity and mortality due to gastro-intestinal disorders, typhoid fever, etc., until we stop making open sewers of our rivers, lakes and streams.

Not only are we stopping the pollution of water supply but we are likewise able by chemical and physical agents to purify the supply even after it has become contaminated.

To-day a great battle is being waged against the fly, mosquito, rodents and other disease-conveying insects and animals. A vigorous campaign is being waged against tuberculosis. Millions of dollars are being spent annually in education and building hospitals not only for chronic, but for the incipient cases in order to bring about the segregation of those suffering from the disease, that we may better prevent the spread of disease to others.

Medical and dental school inspection, the examination and observation in psychopathic wards of persons afflicted with mental disease are conspicuous examples of the evolution that is taking place in things medical.

HOSPITAL STANDARDIZATION COMMITTEE OF THE ILLINOIS STATE MEDICAL SOCIETY SUBMITS THE FOLLOWING RULES AND REGULATIONS: COPY OF THE QUESTIONNAIRE TO BE USED IN HELPING TO DETERMINE THE ELIGIBILITY OF HOSPITALS THAT MAY POSSIBLY COME UNDER THE JURISDICTION OF THE COMMITTEE IN THEIR WORK OF STANDARDIZATION OF ILLINOIS HOSPITALS.

RULES FOR STANDARIZATION OF HOSPITALS ADOPTED BY THE COMMITTEE OF HOSPITAL STANDARDIZATION OF THE ILLINOIS STATE MEDICAL SOCIETY.

Regulations for determining the eligibility of hospitals in the State of Illinois for the reception and training of internes during the fifth (interne) year of medical instruction.

1. Hospitals must be of at least twenty-five beds capacity, with a daily average of at least twenty patients. Each interne shall spend his entire year of service either—

(a) In one hospital in which there must be a min-

imum daily average of five medical and five surgical cases, or

(b) Shall divide his service between two or three hospitals in such manner as to secure adequate practical experience with medical, surgical and obstetrical patients.

2. Hospitals must have an organized staff which is to be held responsible for the general character of the professional work of the hospital.

3. Hospitals must require a history of the cases treated and a complete hospital record must be kept.

4. Hospitals must be equipped for all routine clinical, microscopical, pathological and bacteriological work, with a staff member in charge. Internes are to be instructed in and have practical laboratory work.

5. Hospitals must have at their disposal a complete x-ray department with a qualified person in charge under supervision of the staff. Internes are to receive instruction in details of the work.

6. Hospitals must provide instruction in anesthesia for internes under expert supervision.

7. Hospitals receiving obstetrical cases must provide instruction for internes under expert supervision in the delivery of normal and the more common abnormal cases.

8. Hospitals are to provide rules setting forth the duties and privileges of internes. The same must be posted and each interne provided with a copy.

LETTER OF TRANSMITTAL OF RULES AND QUESTIONNAIRE OF THE HOSPITAL STANDARDIZATION COMMITTEE OF THE ILLINOIS STATE MEDICAL SOCIETY.

The inclosed copy of regulations for determining the eligibility of hospitals for the reception and training of internes during the fifth (interne) year of medical education were adopted at a joint meeting of the Illinois Hospital Association, the Council on Medical Education of the Illinois State Medical Society and representatives of the Medical Colleges of this State, held in Chicago on August 13, 1920.

These regulations have since been approved by the Director of the Department of Registration and Education of the State of Illinois.

For the purpose of determining which hospitals shall be eligible under these regulations, it has been agreed and arranged that an inspection of all hospitals in this State will be made by the Illinois State Medical Society through their Councilors. These Councilors will inspect the hospitals located in their own territory, and in Chicago will, so far as possible, be assigned to hospitals with which they are not directly affiliated.

The Councilors will be fully instructed in the details of the requirements imposed, and will be provided with blanks upon which all information collected will be noted. This will insure a uniformity of inspection and tabulation of the results thereof.

In connection with this survey the Illinois Hospital Association desires to be of assistance to hospitals which may be deficient in any of the details of the requirements imposed in order that as many hospitals as possible may be declared eligible, and to the end that

the general efficiency of all hospitals in the State may be benefited through this work.

It is distinctly understood that failure on the part of any hospital to meet these requirements in full SHALL NOT be considered or construed to reflect on the reputability or good standing of any such hospital in any manner.

The results of all information collected in this manner will be available for all hospitals in the State, with the understanding that in no case will the name or location of any hospital be furnished without specific permission in each case.

Your full co-operation in this matter is necessary, and we urge that you instruct the person in charge of your hospital to afford our representative every facility for obtaining the information he desires upon his first visit to the hospital.

HOSPITAL STANDARDIZATION COMMITTEE OF THE ILLINOIS STATE MEDICAL SOCIETY.

M. L. HARRIS, M. D.;
JOHN S. NAGEL, M. D.
CLIFFORD U. COLLINS, M. D.,
RALPH T. HINTON, M. D.,

Secretary Elgin State Hospital, Elgin, Ill.;
J. V. FOWLER, M. D.,

Chairman, 1225 N. Ashland Ave., Chicago, Ill.

HOSPITAL STANDARDIZATION COMMITTEE OF THE ILLINOIS STATE MEDICAL SOCIETY SUBMITS THE FOLLOWING QUESTIONNAIRE TO THE HOSPITALS IN THE STATE

FOR THE PURPOSE OF DETERMINING THE HOSPITALS AVAILABLE FOR THE RECEPTION AND INSTRUCTION OF INTERNES IN ACCORDANCE WITH THE LAW GOVERNING THE SUBJECT

- 1. Name of Hospital?.....
- 2. Location?
- 3. President of Board of Trustees?.....

- 4. Has Hospital an organized staff?.....
- 5. Method of organization.....
- 6. Is the staff prepared to give proper instruction to Internes?.....
- 7. Who is responsible for the general character of the professional work of the Hospital?
- 8. Capacity of Hospital (Beds).....
- 9. Class of cases cared for:
Surgical
Medical
Obstetrical
Children
Nervous and Mental.....
Drug and Alcoholic.....
- 10. Average daily number of patients:
Surgical
Medical
Obstetrical
Children
Nervous and Mental.....
Special
- 11. What records are kept of cases treated?.....
- 12. Describe laboratory and equipment?.....
- 13. Is the laboratory in charge of a member of the staff?
- 14. Who instructs Internes in laboratory work?....
- 15. Describe X-Ray laboratory and equipment.....
- 16. Is it located in the Hospital or outside?.....
- 17. Is there a competent Roentgenologist in charge?
- 18. Do Internes receive instruction?.....
- 19. What provision is made for the instruction of Internes in the delivery of Obstetrical cases?
- 20. Does the Hospital provide rules setting forth the duties and privileges of Internes?.....
Are the same posted?.....
Are Internes provided with a copy?.....

HOSPITALS IN THE STATE OF ILLINOIS, OUTSIDE OF CHICAGO.

ALTON— St. Joseph's Hospital. Alton State Hospital for the Insane.	BATAVIA— Bellevue Place Sanitarium.	CAIRO— St. Mary's Infirmary. Yates Memorial Hospital.
AMBOY— Amboy Public Hospital.	BELLEVIEW— St. Clair County Home and Isolation Hospital. St. Elizabeth's Hospital. St. Vincent's Hospital.	CANTON— Graham Hospital.
ANNA— Hale Sanatorium. Anna State Hospital.	BELVIDERE— Belvidere Public Hospital. St. Joseph's Hospital.	CARBONDALE— Holden Hospital.
ARGO— Sacred Heart Hospital.	BLOOMINGTON— Brokaw Hospital. Kelso Sanitarium and Hospital. St. Joseph's Hospital, W. Jackson St.	CARLYLE— St. Mary's Hospital and Home for the Aged.
AURORA— Providence Hospital. Argo Hospital.	BLUE ISLAND— St. Francis' Hospital.	CENTRALIA— St. Mary's Hospital.
AVISTON— St. Joseph Infirmary. St. Charles Hospital. Mercyville Sanitarium. Aurora Hospital Ass'n.	BREESE— St. Joseph's Hospital.	CHAMPAIGN— Julia F. Burnham Hospital.
		CHARLESTON— M. A. Montgomery Memorial Sanitarium.

- CHATSWORTH—
Chatsworth Hospital.
- CHICAGO HEIGHTS—
St. James Hospital.
- CLINTON—
Dr. John Warner Hospital.
- COLLINSVILLE—
Harrison Hospital.
Harrison Tuberculosis Colony.
- COMPTON—
Compton Hospital.
- DANVERS—
Parkhurst Sanitarium.
- DANVILLE—
Lake View Hospital.
St. Elizabeth's Hospital.
Vermillion County Infirmary.
- DECATUR—
Decatur and Mason County Hospital.
St. Mary's Hospital.
Wabash Employees' Hospital Ass'n.
- DE KALB—
De Kalb Public Hospital.
- DIXON—
Dixon Public Hospital.
Dixon State Hospital.
- EAST MOLINE—
Watertown State Hospital.
- EAST ST. LOUIS—
Contagious Hospital.
Evangelical Deaconess Hospital.
St. Mary's Hospital.
- EDWARDSVILLE—
Madison County Hospital.
- EFFINGHAM—
St. Anthony's Hospital.
- ELGIN—
Resthaven Sanatorium.
Sherman Hospital.
St. Joseph's Hospital.
Elgin State Hospital.
- ELMHURST—
Crane Sanitarium.
- EUREKA—
F. W. Nickel Hospital.
- EVANSTON—
Evanston Hospital.
Evanston Sanitarium.
St. Francis Hospital.
- FREEPORT—
Emergency Hospital.
Freeport General Hospital.
Globe Hospital.
Little Hospital.
St. Francis Hospital.
- GALESBURG—
Galesburg Cottage Hospital.
St. Mary's Hospital.
- GENESEO—
J. C. Hammond Hospital.
- GENEVA—
Colonial Hospital.
- GRANITE CITY—
St. Elizabeth Hospital.
- HARRISBURG—
Harrisburg Sanitarium.
- HARVARD—
Cottage Hospital.
- HERRIN—
Baker-Gardiner Hospital.
Herrin Hospital.
- HIGHLAND—
St. Joseph's Hospital.
- HIGHLAND PARK—
Highland Park Hospital.
- HILLSBORO—
Hillsboro Hospital.
- HINSDALE—
Hinsdale Sanitarium.
- INGLESIDE—
Sunnybrook Farm Sanitarium.
- JACKSONVILLE—
Norbury Sanatorium.
Our Saviour's Hospital.
Jacksonville State Hospital.
- JOLIET—
Silver Cross Hospital.
St. Joseph's Hospital.
- KANKAKEE—
Barrett Hospital.
Emergency Hospital.
Kankakee State Hospital.
- KEWANEE—
St. Francis Hospital.
- KNOXVILLE—
Knoxville County Home and Hospital.
- LA GRANGE—
La Grange Sanitarium and Hospital.
- LAKE BLUFF—
Wheeler Convalescent Home.
- LAKE FOREST—
Alice Home Hospital.
Lake Forest Hospital.
- LA SALLE—
St. Mary's Hospital.
- LAWRENCEVILLE—
Lawrenceville Hospital.
- LINCOLN—
Evangelical Deaconess Home and Hospital.
St. Clara's Hospital.
- LITCHFIELD—
St. Francis Hospital.
- MACOMB—
Holmes Hospital.
Marietta Phelps Hospital.
St. Francis Hospital.
- MARION—
Emma Jones Hospital.
Marion Hospital.
- MATTOON—
Methodist Memorial Hospital.
- MAXWELL—
Peoria County Hospital.
- MENARD—
Chester State Hospital.
- MENDOTA—
Harris Hospital.
- METROPOLIS—
Walbright Hospital.
- MOLINE—
Lutheran Hospital.
Moline Public Hospital.
Tri-City Sanitarium.
- MONMOUTH—
Monmouth Hospital.
- MORRIS—
Morris Hospital.
- MT. VERNON—
Egyptian Hospital.
- MURPHYSBORO—
St. Andrew's Hospital.
- NAPERVILLE—
Edward Sanatorium.
- NORMAL—
Fairview Sanatorium.
- OAK FOREST—
Cook County Infirmary and Tuberculosis Hospital.
- OAK PARK—
Oak Park Hospital.
West Suburban Hospital.
- OTTAWA—
Ryburn Memorial Hospital.
- OLNEY—
Olney Hospital.
Olney Sanitarium.
- OREGON—
Allen John Sanitarium.
Illinois Valley Hospital.
La Salle County Tuberculosis Sanitarium.
Ottawa Tuberculosis Colony.
- PANA—
Huber Memorial Hospital.
Pana Deaconess Home and Hospital.
- PARIS—
Paris Hospital.
- PEORIA—
Isolation Hospital.
John C. Procter Hospital.
Methodist Hospital of Central Illinois.
Peoria Municipal Tuberculosis Sanitarium.
Peoria Sanitarium.
St. Francis Hospital.
Sulphur Springs Sanitarium.
Peoria State Hospital.
- PERU—
Isolation Hospital.
Peoples Hospital.
- PONTIAC—
St. James Hospital.
- QUINCY—
Blessing Hospital.
St. Mary's Hospital.
- RED BUD—
St. Clement's Hospital.
- RIVERTON—
St. John's Sanitarium.
- ROBINSON—
Robinson Hospital.
- ROCHELLE—
Lincoln Hospital.
- ROCKFORD—
Rockford Hospital.
Rockford Municipal Sanitarium.
St. Anthony's Hospital.
Swedish-American Hospital.
Weirick's Sanitarium.
Dr. Wilgus' Sanitarium.
- ROCK ISLAND—
Detention Hospital.
Municipal Tuberculosis Sanatorium.
St. Anthony's Hospital.
- SHELBYVILLE—
Shelby County Memorial Hospital.

SPRINGFIELD—

David Prince Sanitarium.
The Homestead, Hosp. Dept. of the
Palmer Tuberculosis Sanatorium.
Isolation Hospital.
Redemption Home.
Springfield Hospital.
Springfield Open-Air Colony.
St. John's Hospital.

SPRING VALLEY—

St. Margaret's Hospital.

STERLING—

Keefer Hospital.
Sterling Public Hospital.

STREATOR—

St. Mary's Hospital.

SUBLETTE—

Dr. Angear's Hospital.

SYCAMORE—

Sycamore Public Hospital

TAYLORVILLE—

St. Vincent's Hospital.

TUSCOLA—

Sarah A. Jarman Memorial Hospital.

URBANA—

Champaign County Hospital.

WATERMAN—

Waterman East Side Hospital.

WATSEKA—

The Iroquois Hospital.

WAUKEGAN—

Lake County General Hospital.
Victory Memorial Hospital.

WHEATON—

Mary E. Pogue Sanitarium.

WINFIELD—

Chicago-Winfield Tuberculosis Sanita-
rium.

WOODSTOCK—

Woodstock Hospital.

ZEIGLER—

Zeigler Hospital.

LEGISLATIVE NEOPLASMS, EVERY ONE OF THEM, MALIGNANT SOCIALLY

COMPULSORY HEALTH INSURANCE—A SOCIALISTIC WEDGE LEADING TO NATIONAL SOCIALIZATION OF MEDICINE WITH STATE MEDICINE AS THE TRANSITION STAGE

A "cause" which requires a lie for argument has neither excuse nor reason for tolerance by honest men. The propaganda of the American Association for Labor Legislation, analyzed below, is just such a cause; the "24 cents per week per employee and employer" has been consistently and persistently dangled before the public as "bait." The line has been decorated with the roseate colored allurements of "Free Doctors, Free Medicine, Free Maternity Care, Free Hospitals, Laboratories, Etc., Etc., and Cash Benefits"

—and weighted with the ponderous endorsement of a sensational foster-father (Davenport) who, as a propagandist, says: "The cost will be distributed as increased efficiency and good will," and who, as an erstwhile professor of political economy, *knows and must know*, that the employer's cost will be added to his "overhead" and passed on to the ultimate consumer,—the working man,—who, in the last analysis, will be a "poor fish" if he swallows the propaganda, hook, line and sinker.

The U. S. Bureau of Labor Statistics in the spring of 1919 estimated \$26.00 per year as the normal cost per person for health service and supplies. This analysis makes \$24.74 the basis—the propaganda premium yields \$2.42! (See line H.)

HOW COMPULSORY HEALTH INSURANCE WILL WORK OUT IN NEW YORK STATE FIND YOUR OWN STATE'S WORKING POPULATION AND APPLY IT

The propagandists say: "The average man earns \$2 per day; loses 9 days per year from illness; will pay 24c per week—his employer paying the same—that with this premium he can receive all cash and medical benefits and the cost to the taxpayers will be nominal.

For one
"Average
Man"

\$ Totals

For 1,000 Persons, the
Equivalent of 500 Fam-
ilies, Under the Care of
One Panel Doctor

\$ Totals

For the 4,000,000 working men
and women who are to be the
natural victims of compulsory
health insurance

\$ Totals

A—CASH BENEFITS—For 6 of the 9 days the
"average man" is sick—Per year @ \$1.14 6.84

6,840

27,360,000

—A

B—MATERNITY BENEFITS—For the "average
man's" proportionate share—2.43 days @
\$1.14 2.76

2,760

11,040,000

—B

C—FUNERAL BENEFITS—For the "average
man's" proportionate share equivalent to 1.46

1,460

5,840,000

—C

D—TOTAL CASH BENEFITS PER PROVI-
SIONS OF BILL 11.06

11,060

44,240,000—D

E—RESERVE, 15%; GUARANTY, 15% 7.49

7,490

29,960,000—E

F—ADMINISTRATION EXPENSE, 16% 3.99

3,990

15,960,000—F

G—TOTAL CASH BENEFITS, RESERVE,
GUARANTY, ADMINISTRATION 22.54

22,540

90,160,000—G

H—AMOUNT AVAILABLE FOR HEALTH
SERVICE AND SUPPLIES 2.42

2,420

9,680,000—H

I—PROPAGANDA PREMIUM OF 24c PER
WEEK 24.96

24,960

99,840,000—I

J—DEFICIT—On basis of present, normal "mean"
cost for health service and supplies \$24.74 22.32

22,320

89,280,000—J

K—APPROXIMATE ECONOMIC PREMIUM 47.28

47,280

189,120,000—K

H—The \$2,420-Line-H-Total-Column-2 must be made sufficient for Doctor, Dentist, Druggist, Nurse, Hospital, Laboratory, Sanitaria, Etc., plus all medical, surgical and obstetrical supplies—for 1,000 persons for a total of 11,430 sickness days per year, inclusive of maternities in "insured women and the wives of insured men."

J—This deficit must be made good by increasing the annual premium until it represents 10.3c of every dollar a workman earns—or the taxpayers must make good an annual deficit of approximately \$90,000,000. (And the whole cost of the state administration in 1919 was \$59,000,000.)

N. Y. STATE ASSOCIATION OF THE MEDICAL AND ALLIED PROFESSIONS—John J. A. O'Reilly, M. D., Chairman,
405 Union St., Brooklyn, N. Y., July 20, 1920.

PROPOSED DRASTIC MEDICAL LEGISLATION IN CALIFORNIA AND OREGON.
OTHER STATES TAKE NOTICE OF
WHAT IS IN STORE FOR YOU.

FOUR ANTI-HEALTH MEASURES PROPOSED. THEY APPEAR TOGETHER ON THE BALLOT AND HAVE A SINGULAR UNITY OF PURPOSE AND ARE APPROPRIATELY CALLED THE "QUACK QUARTETTE."

Three amendments and one recall will come up for consideration before the voters of California on November 2nd. They are the chiropractic initiative amendment, the anti-vaccination amendment, the anti-vivisection amendment, and the so-called poison act.

In Oregon, there is a constitutional amendment proposed which reads as follows: "No form of vaccination, inoculation, or other medication shall be made a condition in this state for admission to, or attendance in, any public school, college, university, or other educational institution; or for the employment of any person in any capacity or for the exercise of any right, the performance of any duty, or the enjoyment of any privilege."

This amendment was originally introduced in California. It was realized, however, that it could not pass in this form and was evidently amended by the omission of the last clause and the insertion instead thereof of a statement to the effect that the amendment should apply to any person holding public office.

We have now at hand a copy of the vivisection amendment. It is, however, exceedingly drastic, and would prohibit animal experimentation of any kind. We do not think there is much likelihood of this amendment passing. A splendid object lesson has recently been shown in the State of California through the researches of the State Board of Health, who have proven that botulism in ripe olives can be prevented if they are heated to 240 degrees for forty minutes. The experiments made by the State Board of Health were conducted on guinea pigs and the results accomplished saved the olive industry of the state.

The anti-vaccination amendment is being pushed very hard by its proponents and its passage in the early part of the campaign seemed likely both in Oregon and in California.

The Chiropractic Initiative Act proposes to create a board of examiners composed exclusively of chiropractors for the exclusive benefit of certain groups of chiropractors. This dangerous demand for special legislation was rejected by the last California legislature and previous legislatures.

Five reasons are here given for its defeat.

First, there are 27 drugless cults in California, chiropractic being one of them. If chiropractors are granted a special board, the other 26 are equally entitled to a special board.

Second, with 27 varieties of boards to examine 27 varieties of cults, the state would lose proper control

and could not protect the lives and health of its citizens from the incompetent, unskilled and unscrupulous.

Third, the chiropractic initiative is based on the false pretense that the present California board of examiners is unqualified to examine chiropractors. All competent applicants can now secure licenses by passing the examination and complying with lawful requirements.

Fourth, the chiropractic initiative is promoted by chiropractic colleges and groups of "advertising specialists" who declare that chiropractic contains unlimited possibilities for great financial success. If granted the power to license themselves, regardless of educational qualifications, "great financial success" may be won at the expense of the sick.

Fifth, the welfare of the public is best protected by one responsible board. The governor can change the membership of the present board whenever he deems it desirable. The courts can review and reverse the Board's decisions. From such a well-regulated Board all applicants are assured of ample justice and the people of adequate protection.

Prohibiting compulsory vaccination is the misleading title of the second proposition—the anti-vaccination, anti-inoculation, anti-medication, anti-health constitutional amendment. The California State Board of Health declares that if this amendment is adopted the state will be in constant danger of an epidemic of smallpox and the State Board of Health will be powerless to check such an epidemic.

There are six reasons why it should be defeated: First, it is filled with lurking dangers. It breaks down necessary health, sanitation and quarantine laws. It not only removes the safeguard of vaccination, but outlaws "inoculation or other medication," which means that children may come from homes in which there is diphtheria, scarlet fever, measles, infantile paralysis and any infectious or communicable diseases and attend school and endanger the lives of other children.

Second, to understand the real purpose of this amendment one must read the official report of "The Public School Protective League"—a religio-politico organization which placed this anti-health amendment on the ballot. Its official report shows that it worked actively against the public health activities of the Children's Bureau, the National Tuberculosis Association, the Red Cross, the Y. M. C. A., the War Camp Community Service, the Junior Red Cross, Dental Nurses, et al., and hampered the federal, state, county and city boards of health.

Third, in the light of its anti-health record the specious plea of the misnamed "Public School Protective League," that its only purpose is to prohibit compulsory vaccination of school children is shown to be deceptive.

Fourth, California already has a law exempting children whenever parent, guardian or persons responsible for them, are conscientiously opposed to the practice of vaccination.

Fifth, American law does not recognize the right of

the individual to do as he pleases when his act endangers life or health of his family, his neighbors or the citizens generally. This amendment demands these perilous privileges.

Sixth, all health and medical authorities agree on the protective value of vaccination. The United States Government insists on vaccinating all who join the army or navy—*why?* Because vaccination protects them. It would be criminal folly for California to nullify its health laws and abandon a thoroughly tested and reliable method of protection against the dreadful scourge of smallpox.

The anti-vivisection amendment prohibits vivisection. It is a destructive measure proposed by the misguided and supported by the misinformed. It prohibits "experimentation" on rats, fleas, mosquitoes, rabbits, mice, guinea pigs, snakes, birds, cats and dogs and on all other animals, regardless of whether the "experimentation" involves any cutting or causes any pain. It would be as pernicious to animals as to man. It would stop the progress and destroy the development of California's resources. Here are seven reasons why this amendment should be defeated.

First, the health and welfare of the people of the state depend upon an abundant supply of wholesome food. If the anti-vivisection measure is adopted the means by which the farmers now stop the spread of chicken cholera, hog cholera, anthrax, scab, black leg, texas fever, lumpy jaw, etc., the means by which feeding and breeding experiments are scientifically conducted, the means by which the cause and remedy for botulism and other food poisons are discovered, would be permanently prohibited. This means less food, dearer food, and more dangerous food.

Second, the serum and virus to protect hogs against cholera, like many other valuable remedies, were developed through animal experimentation by the United States Bureau of Animal Industry. Losses from hog cholera alone have been reduced 60 per cent. through animal experimentation—a saving of \$41,000,000 per annum.*

Third, animal experimentation is the foundation of bacteriology. Without it you can not have safe milk.

Fourth, you don't want your children to get tuberculosis from tuberculous cattle. You don't want them to suffer and die from laryngeal diphtheria. The eradication of tuberculosis among food-producing animals is impossible without tuberculin and without anti-toxin many children must choke to death. Anti-toxin, tuberculin and an endless list of life-saving treatments would be prohibited by the inhuman anti-vivisection act.

Fifth, whether one estimates the value of animal experimentation in food, in clothes, in money, in suffering relieved or lives saved, it is of incalculable benefit, it has provided the veterinarian and sanitarian with powerful means of relieving suffering and preventing and controlling disease. It is the basis of sanitary campaigns. It led the way to conquer yellow fever, malaria, typhoid, typhus, bubonic plague and smallpox. It discovered the specific cures for diphtheria, hydro-

phobia, tetanus, syphilis, etc. This anti-vivisection act would stop the crusade against venereal diseases.

Sixth, the safety of modern surgery, the practice and progress of modern medicine, depend upon animal experimentation; 95 per cent. of animal experiments are to determine the strength, purity and safety of drugs that are used by physicians, dentists and veterinarians for the benefit of man and animals. Anesthetics are used in animal operations the same as in operations on persons wherever the procedure would otherwise inflict pain. Anesthesia is a product of animal experimentation. This anti-vivisection act would prohibit anesthesia and make all operations on man and animals cruelly painful and horribly hazardous.

Seventh, the anti-vivisection initiative in California would result in a permanent quarantine being placed against the state that would restrict the movements of cattle, sheep, hogs, poultry, and farm, garden and orchard products. The people of the state would be deprived of the scientific means of finding out for themselves or proving to other states that California products are fit for human or animal food.

The doctor's public health agencies, life insurance companies and public-spirited citizens generally are working energetically to defeat these measures in California and Oregon. The Metropolitan Life Insurance Company alone, we are reliably informed, distributed 500,000 pieces of educational literature among their policyholders in the two states.

A NEW DEPARTMENT.

Beginning with the January issue, the *Medical Review of Reviews* of New York will inaugurate a new department for the advancement of the science of Chemo-Therapy.

In order to develop the theories as set forth by the various investigators who have thus far entered this field, we invite the co-operation of all the physicians, chemists, bacteriologists and pharmacologists who are doing and contemplate doing work along these lines.

It is our purpose to stimulate a more thorough fundamental knowledge of this subject, which so far is little known to a great number of practicing physicians.

Believing Chemo-Therapy to be a rich field for the development of products of great therapeutic value, and that we have so far neglected to give it the importance that past researches would warrant, we are placing this department at the disposal of all those who may find an interest in the subject, as an open forum where contributions dealing with this science will be welcomed.

A NEW MEDICAL JOURNAL.

General practitioners as well as specialists in obstetrics and gynecology will welcome the *American Journal of Obstetrics and Gynecology*, which was issued from the press of the C. V. Mosby Company, St. Louis, in October, for the first time. The new publication is a worthy successor to the *American Journal*

of *Obstetrics and Diseases of Children*, which discontinued publication in February.

The editor, Dr. Geo. W. Kosmak and the associate editor, Dr. Hugo Ehrenfest, will be assisted in defining the policies of the new journal by an editorial board representing the American Gynecological Society, the American Association of Obstetricians and Gynecologists and several of the larger obstetrical societies. Number 1 of Volume I contains the proceedings of the 45th annual meeting of the American Gynecological Society, held in Chicago, May 24-26, 1920, and several of the addresses and papers read on that occasion, as original articles.

The style and illustrations of this publication are of the uniform grade of the Mosby Company and we bespeak a general welcome on the part of the profession for this ambitious undertaking.

GETTING A MEDICAL EDUCATION IN ILLINOIS FIFTY YEARS AGO— PROCURING DISSECTING MA- TERIAL A REAL HAZARD.

Dr. Norman Bridge in his latest work, "The Marching Years" (which we reviewed exhaustively in our October number), Chapter 8, gives data that we are confident will be of interest to many Illinoisans. We reproduce this chapter in full:

The fact that medical students must, when under proper instruction, dissect the human body, is usually lazy in the casual lay mind; is often spoken of under the breath; and is doubted by many persons of superficial minds who are wont to take the world about them for granted. That a person competent to treat and operate on the sick human body must have had practical study of anatomy, never occurs to half the people; hence it is not strange that many good souls should think it horrid or sacrilegious, and that the procurement of bodies for dissection seems an outrage on human rights and the sanctity of the dead.

Not only is it indispensable that every practitioner shall have had this study, in order to be competent, but for this purpose bodies have, until recent time, usually had to be procured in illegal or illegal ways.

As from my graduation in medicine it fell to my lot to teach anatomy for two years, and sometimes, then and later, to be concerned in the procurement of material for study, a record is here made of some of these experiences.

In the spring of 1868 Dr. Charles T. Parkes was graduated from Rush as I was from the Chicago College. He was soon appointed Demonstrator of Anatomy in his *Alma Mater*, and I was made Assistant Demonstrator in mine. Dr. John M. Woodworth was the Demonstrator of record, and my chief. He was one of the finest gentlemen I was ever associated with; but he was fastidious, and hated the program of daily teaching in a practical-anatomy

room; it was too untidy and malodorous—besides, he was diffident with students.

Parkes was a man of great force and a fine anatomist. He afterward became a superior surgeon; and died Professor of Surgery in his *Alma Mater*.¹ He was my colleague and friend during the last fifteen years of his life. He began his work as Demonstrator with enthusiasm, and prepared for the next college session. One of his most important and delicate duties was to supply material for dissection. Up to that time, and for years afterward, substantially all cadavers for American medical schools were procured in some illicit way. In many of the states it was a crime to procure bodies, and it was an offense against the law to practice without a knowledge of anatomy that dissection alone can give. In our state they could be had only from the Potter's Field or, with daring recklessness, from other cemeteries—or finally by some secret pecuniary arrangement with public officials for the unclaimed bodies from almshouses and prisons.

In the summer of 1868 Parkes and Woodworth agreed that the former should procure all the material for both colleges, and assign it to them according to their respective number of students. Parkes made a secret arrangement with the county undertaker; and we were to share all expenses in proportion to material used.

For a time after the college term began all seemed to go well, but later there was complaint among our students of shortage of material. Some of them visited friends in the rooms of the other college, and reported that they had found there an abundance of good subjects, while ours were few and poor for study. Woodworth made gentle complaint to Parkes, was told that we were getting a square deal, and that we would have to be patient. But matters grew worse rather than better, and it finally became evident that we must act for ourselves or lose our reputation. It was a disagreeable business to tackle; and as my chief had, to my benefit and pleasure, given me all the demonstrating to do, he invited me to assume this task also. He gave me a free hand and no instructions—and did not care to know my plans. He told me in detail of the secret trade Parkes had with the county undertaker, through whom all the material was being secured. This was the way of it: The bodies were put in boxes and assembled in a large vault in an old and mostly vacated cemetery, that had been added to the south end of Lincoln Park. (The vault was nearly the last evidence of the cemetery to disappear.) When a wagon load of boxes had accumulated, the undertaker notified the county inspector to go, late at night, and inspect them, and give him a permit to take them to Jefferson² at daylight the next morning and bury them in the paupers' cemetery. The inspector was an official appointed by the County Board to watch the undertaker and prevent any ir-

¹In the spring of 1891.

²Jefferson was some miles northwest of the city; later to be incorporated into the city.

regular schemes for his own profit. The Board was jealous of its own and the undertaker's public virtue. Between the visit of the inspector and daylight there was time for various manipulations. A bag of sand was usually the only thing buried in each box—if even the box was buried.

The undertaker was a man of caution as well as acumen, and in order to avoid any possible hitch in the arrangements he always himself made a preliminary inspection before calling the public inspector. Once when he made such an inspection he found to his amazement that one of the boxes was empty. If the inspector discovered this the undertaker would probably lose his job, and with it his irregular profits. In fear and anger he hurried to Parkes with the fact of the empty box, and accused him of having allowed his man, in violation of the compact, to steal its contents. Parkes of course denied it, but the man was both unyielding and furious; he said there were only two keys to the vault, of which Parkes had one and he himself the other, and that he knew well that *his* key had not been near the vault, and therefore the other key must have been used—and more talk and much threatening. Parkes saw that it was useless to protest, and told him that it should be made right. The only way to do this was to send men to the Potter's Field in Jefferson, dig up a cadaver through four feet of frozen earth, and bring it back and put it into the empty box before the inspection—all of which was promptly done.

Whether the undertaker was ever convinced that Parkes had told him the truth about the affair was never learned. But it was his own precious key that opened the vault for the theft. A young bearded anatomist who looked ministerially honest had visited the undertaker's place one evening after the proprietor had gone home, and had talked in an extremely friendly way with the Scandinavian helper who had been left in charge. Under a promise to return it early the next morning and to remember the man for his kindness, the key was borrowed. The man said, "Aif you don't get that key back here by seven o'clock tomorrer mornin' I'll lose my yob." The key was there on time by the hand that had borrowed it, and the man received two dollars with a smile of satisfaction that showed he had probably not expected more.

The anatomist had, the evening before, reconnoitered Lincoln Park, and he now sent a trusted man with the key, and instructions to get everything he found in the vault, and take it to a barn in the rear of a drug store on West Lake Street.³

The man found only one specimen in the vault that was fit for study, and he brought that away, covered with a gunny sack and folded in a barrel. After making his promise good to his Scandinavian friend, the anatomist rode with an expressman and the barrel to the college, four miles away. The express wagon was a rickety affair, and he rode with constant fear

that the thing would break down. To add to this peril the cover on the barrel—an inverted, lidless box, held with poorly nailed cleats—was shaken loose, and he had to hold it in its place manually during the rest of the journey. And the curiosity of the driver as to the contents of the barrel had to be appeased.

Dr. Parkes promptly charged Woodworth with what he called a despicable trick, and the latter disavowed any part in the affair—in which he was literally if not constructively justified. Afterward, on my casually meeting Parkes, he charged me with the conspiracy—in a profusion of colorful verbal expletives. The only response made to him was to the effect that I refused to discuss this or any other bygones, but that if we got a square deal thereafter there would probably be no more trouble. And we had a square deal from that time on.

One quandary was never answered—why the undertaker's man took the risk of secretly loaning the key (the importance of which he must have known) to an utter stranger, on no promise of any definite reward. The fact of the awful and unintended practical joke, in connection with the frozen earth, leaked out through a student who was in the office of Dr. Parkes; and for prudential reasons I never afterward referred to it in the presence of the latter.

Years afterward, when I was on the teaching staff of Rush, a law was passed by the legislature permitting almshouses, prisons and hospitals to turn over their unclaimed dead to medical colleges within the State. This of course meant some official graft, which the colleges knew they had to stand, with or without the law. When the law was passed we thought all our troubles about anatomical material were over. And they were, until some members of the County Board fell out with the undertaker because, as was hinted, they failed to get their share of the rake-off. They forbade any further deliveries of subjects to anybody under any circumstances. Then the colleges were confronted with a most desperate situation; they were substantially compelled to buy material at fabulous prices from reckless people, who did some scandalous things to procure it; and some of these people were medical students—more was the pity.⁴ This state of things went on for two years or more before an aroused public sentiment throughout the State compelled the legislature to make the law compulsory instead of permissive. This permanently ended the trouble and put a stop to the heartrending outrages against decency.

During this time of defiance by the county authorities they guarded the unclaimed dead with intense scruple, and tried to have them buried and stay buried. Toward the end of this period, Dr. Strong, the Demonstrator of Rush, came to me in midwinter in great distress, and begged for help in procuring material. He had been to Dr. Parkes, then Professor of Anatomy, for advice and direction. Parkes had declined either to advise or direct him—naturally fearing to be

³This was the store of Dr. J. S. Hunt, a friend whose former home had been Sycamore. I knew his father and brother there.

⁴One of the students, the lesser of two offenders, went to the penitentiary for a year; while his pal and the greater offender ran away, and afterward committed suicide.

involved personally in a risk that properly belonged to the Demonstrator. There was at that time a warm friend of mine at Dunning, an assistant physician to the County Poorhouse and Insane Asylum, who had long desired to do me a favor. He was asked now to help Strong in any way he could, without involving himself in trouble. He promptly called to his aid a close friend of his, the most prominent man in that part of the town, an elderly, staid citizen who was anxious to do him a favor, and who had not lost the love of adventure of his youth. Together they soon brought results.

A curious thing happened. The unclaimed bodies were then being gathered in an old smokehouse near the Asylum until a wagon load had accumulated, when they were all supposed to be buried at one time. The smokehouse was not merely kept locked; it was guarded by a special watchman who was on duty every night. But one morning it was found that some half dozen bodies which were there the night before had disappeared. The county authorities were furious, and at once started an inquisition. The watchman was put upon the rack, and swore that he had been at his post every minute during the night, and saw nobody. One policeman on Milwaukee Avenue testified that in the morning twilight he had seen a team, hitched to bob-sleds carrying a wagon box filled with hay, and with two men on the seat, which passed down the avenue toward the city. He thought it was merely a farmer going to town on normal business. This was all the County Board ever discovered about the theft.

The poor watchman was discharged, of course. His conduct was never explained at the inquisition. He was an honest old fellow who tried to tell the truth; but he forgot to state that, at near midnight, the kind apothecary had come out and said, "Mike, you'll freeze; come into the drug room and get warm"; that he came in, and that this good friend had treated him to a toddy; that he drank the toddy and, after warming himself and swapping stories with the apothecary, he got up to go back to his duty, when the friend entertained him further with conversation and another toddy. Mike's warming inside and out kept him there more than half an hour, enough time for two husky men to hide several objects in a near-by barn. So when Mike came back to his duty the smokehouse was locked, and his beat was waiting for him, apparently as he had left it.

Note:—"The Marching Years." By Norman Bridge, M. D., A. M., LL. D., can be procured of Duffield & Company, New York. Price \$2.50.

WHAT STATE MEDICINE IS NOT

It is not right, however, that this function of the State or nation should be prostituted to the penalization by panelization of the profession of medicine, the pauperization of the people and the profiteering of the politician and professional philanthropist through a

policy of inverted economy parading under the specious title of *welfare*, and wearing the cloak of "Brotherhood of Man," as a Compulsory Health Insurance Act, a State Medicine Act, a National Socialization of Medicine Act, a Coercive Medical Practice (Re-registration) Act, a Drugless Therapy Act, or any group or combination of these Acts until and unless the people who are the heirs to the rights of the collective parties to the Constitution of the State and Nation are afforded a full, free and frank exposition of the *facts* which the propagandists dare not submit and the Medical men *must*, or prove false to their trust; to do this Medical men must *know* and *teach* their people, in the home and on the street, in public halls and in the lay press; by exhortation and in debate, and this they cannot do unless they organize as citizens in professional guilds and associations or by investing their scientific societies with a dual function, the study and mastery of social as well as physical epidemic disease so that the quarantine against hysterical and vicious public health legislation may be as absolute as against the Bubonic Plague.

It is not right that the right of distribution of 10.3 cents of every dollar a working person in the State of New York earns should be taken from him, directly, as premium, or indirectly, as premiums-plus-taxation, to make up the deficit, by writing Compulsory Health Insurance into the Laws of the State of New York at the behest of organizations with high sounding titles whose officer bodies are dominated by men and women in sympathy with the Rand school and the doctrines of the Third Internationale and the Sovietization of American affairs and out of sympathy with the traditions and institutions of our country.

It is not right that a measure, like the Sage-Machold Bill (N. Y. Senate Bill 1533), which completely changes the people's plans for the treatment of human ills, should be jammed through a legislature without giving the people an opportunity to learn and judge and decide whether they want the function of salutary State Medicine expanded to embrace the absorption of the agencies of healing, under a political State head, operating through political bodies like selectmen and supervisors in villages and towns and small cities, and such bodies as the Board of Estimate and Apportionment in large cities, like New York. That Bill was killed in committee, but will be introduced next session.

It is not right that such political bodies should be vested with power to acquire the control of existing hospitals, and other agencies of healing, or to erect others in competition with them, in the most approved trust fashion of taking over or crippling the independent operator, so that he must submit to penalization "eventually—so why not *now*?"

It is not right that a huge political machine, beginning with a state superintendent of health taking his appointment from the party in power and extending down to the health officers who take their appointment from the board of select men, supervisors, etc., and passing out through hospital superintendents, internes and visiting staffs, designated by medical

boards, which are themselves the appointees of lay political bodies, should be constructed, with the health of the individual tax-paying citizen as a pawn in the game and his right of free choice of who shall stand between him and death when disease enters the home, actually or constructively eliminated and the poetic doctor, of his family, in whom he has confidence, forced by economic necessity, to submit to panelization as part of this gigantic scheme to subordinate the agencies of healing to the State Socialization of Medicine, and to convert the sacred profession of medicine into a peace working trade or groups of discontented salary workers, under the domination and control, in the exercise of their medical faculties, of district foreman, for whose medical opinion, in the circumstances of the case, the average self-respecting doctor of today would not give a "whoop in Hades." Yet, all of these things are part of the provisions of the Sage-Machold Bill in its practical operation because the judicial branch of the government would be bound to interpret that statute according to the "ordinary meaning of the words," which is far different from what the propagandists intend the average man to think they mean; let me give you a startling example.

Propaganda vs. Operation: A Medical Practice Act (Kenyon Bill Assembly Bill 840) was introduced at Albany this year; it is known as "the Medical Re-Registration Act," and forms an amendment to the already existing Medical Practice Act, Sec. 164, Chap. 49 (1909), constituting Chap. 45 of the Consolidated Laws under which physicians exercise their faculties. The propagandists said (some of the prominent leaders of medicine in the state actually believed) that the purpose of the bill was to provide a proper census of the medical forces of the State and check the illegal practice of medicine by transferring the prosecution of such cases from the district attorney of a county to the attorney general of the State. The introducer of that bill pleaded for its passage on the ground that the State Medical Society Committee had endorsed it; another assemblyman said that it was a bad bill, that the rank and file did not want it; it was killed. Why? We need a medical census, as much as a cat needs two tails; we have one, now, and the U. S. Census Bureau has about completed another. The implication that the district attorneys of the counties in this State select the unlawful and illegal practice of medicine as the channels through which to manifest their betrayal of trust is not warranted by the facts, and, even if true, would not warrant this new law because the law under which the district attorney now exercises his function makes him a district attorney in the district which forms part of the attorney general's jurisdiction and the attorney general, for cause, may supercede the district attorney for any county in the State, and through a special deputy attorney general conduct any prosecution in which the State, as such, is a party in interest. Again, why should this bill have been killed? Because it resurrected and revived a part of the original Medical Practice Act, which was necessary and equitable

in 1896 to provide for the endorsement of diplomas and licenses of those graduating in medicine, prior to 1895 (of whom there are not a half dozen in this state today, whose registration of license has not been affected or contains some technical defect which requires remedying); but, at this time, a quarter of a century after that section had served its purpose, as an enabling clause to permit the regents to recognize *de facto* physicians, as *de jure*, in accordance with the (then) new law. This section is entitled to remain "dead" instead of being brought back to life by an alteration in the fee, from \$25.00 to \$50.00 for endorsement of the diplomas of those graduates, prior to 1895 (probably 6 out of the 15,000 physicians in the State), and by the additional recognition of an unofficial organization, *The National Board of Examiners*, as an examining body in the process of licensing physicians. The two changes in the section of the law and the provision for annual re-registration, and the investiture of the licensing body with discretionary powers and the withdrawal of the moral interdiction of foeticide and infanticide and contraception (Sec. 170-d) so materially alters the Medical Practice Sections of the Public Health Law as to make it operative as a legislative entity with the status of *new law* and in considering the mandamus proceeding of a doctor, graduating *after* 1895 (who was in disfavor because he would "not help make operative the Compulsory Health Insurance Bill if passed"), to command the re-registering bureau to accept his two dollar fee and re-register him *without another examination* the judiciary of the State would be powerless to grant relief because it would be bound by the "ordinary meaning of words" in the interpretation of that statute. This Medical Practice Act, if passed, taken with the ruling decision on the *police power of the State* in this connection (Dr. Dent vs. State of West Virginia, 129 U. S. Reports, page 114, year 1889) would serve as the fulfilment of the threat of a New York senator speaking at the meeting of the 11th Assembly District Chapter of the Professional Guild of Kings County, October 31, 1919, during the Fall campaign, against Compulsory Health Insurance when he said: "If you refuse to make operative the Compulsory Health Insurance Bill, if passed, your license to practice medicine will be taken from you under the police power of the State." In the pamphlet which I had written a few months previous to this threat (*The Menace of Compulsory Health Insurance*) I had said the same in warning (paragraph 36):

"We take our license to practice Medicine from the State, and what the state giveth, the state may take away; better that, a thousand times, than that we should be a party to a plan which debases our sacred professions, endangers the public health, increases the death rate and the days-lost-per-year from illness of the people of this State, as it (Compulsory Health Insurance) has demonstrated its capacity to do in Germany, where, for thirty-five years, it has rested as a curse upon the body politic as part of the infamous

Kultur inaugurated by Bismarck and carried to ruin by the unspeakable Paranoiac of Potsdam."

Medical Record, Oct. 16, 1920. By J. J. A. O'Reilly, M. D., Chairman of New York State Association of the Medical and Allied Professions.

CHANGE IN NAME IDENTIFIES THE WILSON LABORATORIES WITH WILSON & COMPANY

HOLLISTER-WILSON NAME DISCONTINUED—ORGANIZATION REMAINS THE SAME.

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Correspondence

THE FAMILY DOCTOR AND FREE SPLITTING.

To the Editor: So much has been said lately about the division of fees (I am not going to call it fee-splitting) its wrong, its degrading powers, and finally the placing of the family doctor and the surgeon in the class of "crooks," that I have decided to present the family doctor's side. Incidentally it will give the surgeon a hearing too. What follows does not often apply to the large cities. I am writing of conditions in towns of say five to fifty thousand inhabitants.

The following remarks may all appear to be

against the surgeon of these communities; however, before I finish, it will be apparent that there is justice for the surgeon as well as for the family doctor. I want it for both, and for both of us to be raised from the ranks of "crooks."

In many of these communities (I can't always say towns, for much worthy surgery is done in country homes) conditions are as follows. There are minor differences of course, but in general this is the setting. There is the city of five to fifty thousand inhabitants. The hospitals range in size from twenty beds up to possibly two hundred. They are registered and unregistered. Nurses likewise, registered and unregistered, are good, bad and indifferent. The surgeons in these towns are of various grades.

Now here is my first argument for the family doctor, and the division of the operative fee. Most of these surgeons, *not all*, do medical as well as obstetrical work. The average surgeon in a medium sized town, naturally depends on this outside practice as well as on his referred surgery, that is, the work the medical men send in. If he does not do the medicine and obstetrics himself, there is an assistant who does it. No matter, the result is the same, the surgery, the best paid obstetrics, and much of the medicine goes to these men. All right I say, they deserve it, they have the knowledge, but what about the family doctor?

Generally, the family doctor is the one first called, often at two in the morning. He must be ready to diagnose an unruptured ectopic as well as syphilis of the stomach. He must go to Europe, drive a good car, dress well, have a good library, much equipment, send his children to college, and die at fifty, leaving plenty of book accounts and two thousand insurance to his wife.

May I give you an example of what I mean? Remember I am talking of doctors in small communities. Hundreds of doctors will bear me out. About seven months ago, a woman with a papiloma of the ovary came to me. Conditions in the case made the diagnosis hard. The family must know the cause of her immense size. Every little detail had to be most carefully explained. An x-ray was taken. The patient visited my office six or seven times to be convinced the operation was necessary. Only the first visit was charged, patients do not expect to pay for repeated examinations.

Finally relatives arrived from outside towns

in such numbers to go over the case with me, that my office girl began to count the hours so spent. Meanwhile, the patient lost valuable time, I did too, and after thirty-one hours of strenuous talking the patient arrived at the hospital. Up to this point, my charges against the patient and expected by her, were exactly thirteen dollars, ten of which paid for the x-ray picture.

Now we are ready for the surgeon. After two hours of hard work, the operation is done. My calls have been neglected. (I can't afford an assistant, not many family doctors can.) Several patients couldn't wait for me and went to the surgeon's office. (He has an assistant, you remember.) Now as to the operative fee? Is the surgeon to have it all? Yes, if he lets my medicine and obstetrics alone. No, if he does not.

This is not an extreme case. I could tell of many more. No surgical cases, outside of life and death, go willingly to their operations. It takes time, argument, skill, and patience to convince a man against his will and especially if it is for his best good.

Now what happens if things go wrong? Who gets the blame? Who loses the family to another office? This same, necessary family doctor, and still is he to receive no pay for all this? In the course of a year, it is not an uncommon occurrence to lose ten or twelve good paying families to your surgeons. All right, most of us are friends, we need one another, but let there be a fair adjustment.

So far, I have hinted at two solutions. The first is a division of the operative fee, and the second is the whole fee to the surgeon. Meanwhile he gives up most of the medicine and obstetrics, still keeping x-ray and general consultations for which good fees are paid.

There is a third solution. However, the family doctor will have to look out here. I understand in some communities, the surgeons are now making their own charge and allowing the family doctor to make his. This is how it works out. The family is excited, emotion runs high, a son's life has been saved, the surgeon is all in all to that family. He should be, a good surgeon is a wonderful man, he is a life saving part of humanity. However, he makes his charge, now makes it separately, but makes it so high and collects it so quickly, that the family doctor is ashamed to even think of a fee. Meanwhile his

own bill for past medical services drags on for the next five years and is then outlawed.

Even here I see a glimmer of hope. Let the surgeon and family doctor consult together. Let the surgeon make a charge just to the family and *to the family doctor*. Then let the family doctor make his own charge. Tell the family about it, tell them the combined fee is the charge for the operation.

Just one point more. Don't make a secret of this. Let your patients know. Many patients ask me when operative bills are paid where my charges come in. I tell them the charges for the day of the operation, covers mine. They know no one works without pay. The patient wants the family doctor present and to assist. How many say to you, "Well doctor, if you will just stand by me and see to everything, I will go. For my future care, I want you to see what is done and what condition I am in." This is not egotism on the family doctor's part. It is only one of the essential human relationships. However, it takes time. The family doctor is a busy man these days. Temperature and pulse taking do not constitute a diagnosis. Such hours of work as I have described mean time, and time must be paid for.

MARY L. ROSENSTIEL, M. D.,
Freeport, Ill.

REPORT OF PAST YEAR'S WORK OF THE PROFESSIONAL GUILD OF KING'S COUNTY (NEW YORK)

By Frank D. Jennings, M. D., President

At the annual meeting of the House of Delegates held in the Kings County Medical Society Building, May 21, 1920, the following report of the year's work was made by our President:

A review of the first year's history of this organization can do nought but make us enthusiastic about both the necessity for it and the fulfillment of the purpose for which it was created, both of which facts, if one may judge from the liberal financial support recently accorded it, are very firmly entrenched in the minds of the members. Now more than ever, it is absolutely necessary that the organization exist and that it be perpetuated. In this time of great world unrest, of social and economic upheaval and readjustment, when the forces at work are unseen, intangible but potentially and actually mighty, it behooves us as thinking men to see to it that in the chaos, in the mad rush to change the old established order, no harm is done to the public, nor to us, who serve them, in the matter, all essential, of health—life—and their conservation.

The establishment of the Guild, embracing the associated professions of medicine, pharmacy and dentistry, marks the dawn of a new era as it means the substitution of the old idea of protest, with dignity, with a more militant one of aggression. To be brief, it means that as citizens we must step into the public arena, to inform the community and its legislators, of the dangers and pitfalls of attractively attired legislation—so-called "welfare legislation." It means further, apart from strictly public interest, that we will have a voice, a medium through which we may make more effective protest and fight, if need be, with greater assurance of success, against those impending legislative shackles, insidious shackles as we know from bitter experience.

Because of Dr. Webster's inability to serve, most of the tremendous work of the starting of the Guild, of organizing the Assembly District Chapters, of awakening interest in us, of rousing us from our lethargy, devolved on Dr. John J. A. O'Reilly. The work done by him, together with Doctors Heeve, Anderson, Koplowitz, Berkowitz, and others, was colossal. We are under a great obligation to them, for had they not been so zealous and untiring the Guild would have died "a borning." It gives me great pleasure to pay this tribute to those devoted workers. In this connection, the Board of Directors and Assembly District Chapter Chairmen must not be passed by as their interest and work have been loyal and unrelenting.

The various sub-committees of the Board of Directors have done conspicuously good work. They are the Committee of Public Health, of which Dr. John J. A. O'Reilly is chairman. His work requires no eulogy. The Committees on Publications and Speakers, Dr. Wm. C. Anderson, chairman; Ways and Means Committee, Dr. Herbert D. Schenck, chairman; Finance and Membership, Dr. Abraham Koplowitz, chairman—all quietly and unostentatiously have done a great deal of work. Doctors Heeve and Clayton have also contributed lavishly of time and energy in very trying positions.

The problem which presented itself to us in December was to procure an office, and in accordance with the Constitution, an Executive Secretary. The Committee on Ways and Means, of which Dr. Herbert D. Schenck is chairman, took hold of this matter. They, as is generally known, arranged with the Trustees of the County Society for the use of two rooms in the Library Building as an office and also engaged the services of Dr. A. F. Lent as secretary.

Dr. Lent will submit his own report but I would like to say, regardless of that, that he has been most active, efficient and loyal. His long political and legislative experience, together with his medical training and learning, qualified him admirably for the position and he has done yeoman work during the recent Legislative Session. There is no question but that the employment of an executive secretary is as big a step forward and it means that we have arrived at the stage where we recognize the fact that certain

phases of our work must be delegated to men specially experienced in political and legislative work.

The hearty response to the recent letter advising our members of the need of money must be construed as meaning that the practising physician, dentist, and pharmacist, is determined to have a representative body to care for his interests. The question often arises as to the possibility of conflict with the old established State Societies, especially since the House of Delegates of the State Medical Society passed a resolution authorizing the employment of an executive secretary. When the situation is carefully analyzed, however, there seems to be no reason why conflict should be expected or feared. The State Societies of our respective professions have a definite function, chiefly scientific. The function of the Guild is equally definite and can never be displaced or supplanted inasmuch as its organization rests on the Assembly District Chapter as a foundation, a fact of surpassing importance in a civic sense.

For the present and future, the near future, our way seems clear. First, an immediate effort must be made to retain and to increase our membership. The roster should show three thousand at least. Second, such study as we are able to make of the problem of sickness, and, if such a problem exists, to work out a solution for it. In that connection, the Sage Bill of the last session will merit study and it is hoped with that as a basis we may be able next winter to go to Albany with a constructive program. Third, to carry on the work of educating the public through a Speaker's Bureau, and such other means of publicity as may be found effective. Fourth, to take a non-partisan interest in the approaching primary and election to the end that we may know the attitude of the various candidates on Compulsory Health Insurance. Summarizing, it could be said that we must strengthen our organization, study the problems of sickness, work out a method of relief, if one is needed, and take the interest in elections that all good citizens should take.

The first year in our history has been written, and if I mistake not, written in non-erasable letters of permanence. Let us resolve that the structure to be erected on this foundation shall be one of strength and determination, characterized by unity of purpose and unity of action.

FRANK D. JENNINGS, M. D.

PUBLIC HEALTH

PREVALENCE OF DIPHTHERIA

Diphtheria is now prevalent in epidemic form in a number of sections of the State.

In anticipation of further spread of the disease, the State Department of Health is seeing to it that all of the three hundred agencies throughout the State are supplied with ample quantities of diphtheria antitoxin, available for immediate use. Culture outfits also may be obtained at these agencies. The Diagnostic Laboratories at Springfield are prepared to furnish the Schick

test for use in determining immunity to diphtheria. The State Department of Health calls special attention to the branch laboratories located in several sections of the State, to which swabs from the throats of suspects may be sent for examination.

These branch laboratories are as follows: North Branch Laboratory, 1202 W. Madison St., Chicago; West Branch Laboratory, Galesburg; North Central Branch Laboratory, Ottawa; East Branch Laboratory, Chamapign; South Branch Laboratory, Mt. Vernon.

LOAN SERVICE IN MOTION PICTURE FILMS

The State Department of Health is prepared to furnish motion picture films without charge to health officers, clubs, societies, schools and other organizations.

It is required that application for these films be made at least two weeks in advance. Not more than two films are loaned to a community at one time.

ILLINOIS AGREEMENT ON PUBLIC HEALTH NURSING

The State Department of Health, the Central Division of the American Red Cross and the Illinois Tuberculosis Association have entered into an agreement for the organization and supervision of public health nurses in Illinois.

Under this agreement the State Department of Health will employ a supervising nurse, who will have general supervision over all public health nursing service. There is also provided an assistant supervising nurse for Red Cross nursing service, and an assistant supervising nurse for tuberculosis. These assistant supervisors may be employed in whole or in part by the American Red Cross or the State Tuberculosis Association, but will work entirely under the direction of the State Department of Public Health.

Under the provisions of the agreement, it is believed that much of the duplication of effort and overlapping in nursing service will be avoided, inasmuch as no nursing service will be established in any community without conference between the State Department of Public Health and the two extra-governmental agencies to determine the wisest course to pursue.

This State agreement is in harmony with agreements previously entered into between the national office of the American Red Cross, the National Tuberculosis Association and the National Conference of State Health Authorities.

Copies of the agreement may be obtained from the State Department of Public Health.

BIOLOGICAL LABORATORIES ESTABLISHED

The State Department of Health has secured for its Biological Laboratories the quarters situated three miles north of the city of Springfield, formerly employed by the State Department of Agriculture for the production of hog cholera serum.

These buildings will be used for the production of certain biological products for distribution in Illinois.

The Diagnostic Laboratories for the time being will remain in the State House, where they have been housed for a number of years.

In securing these new quarters for the Biological and Research Laboratories, the congestion in the Diagnostic Laboratories has been relieved, and it will be possible to extend the diagnostic work as has not been practicable in the past. The increase in specimens examined in the Diagnostic Laboratories amounts to over four hundred per cent in the last nine months.

CROSS CHECK ON VITAL STATISTICS

The Division of Vital Statistics of the State Department of Public Health has placed in operation a plan whereby much greater accuracy in the registration of mortality and birth data is obtained.

Under the rules of the Department, the local registrars, of whom there 1,500 scattered throughout the State, are expected to make simultaneous reports to the State Department of Health and to the county clerks of the several counties, and failure to comply with this requirement has caused marked discrepancies in the past.

Under the present plan, the Division of Vital Statistics checks up with the county clerk the reports received at Springfield, thereby guaranteeing complete data, both at the county seats and at the central office.

Society Proceedings

COOK COUNTY

CHICAGO MEDICAL SOCIETY

REGULAR MEETING, OCTOBER 6.

1. Non-Surgical Drainage of the Biliary Tract; Its Diagnostic and Therapeutic Possibilities.—Frank Smithies.

Discussion.—Prof. Carlson, John Nuzum, W. W. Hamburger.

2. Osteoplasty Surgery, Illustrated by Moving Pictures and Lantern Slides.—Fred H. Albee, New York, N. Y.

REGULAR MEETING, OCTOBER 13, 1920.

1. Testicle Transplantation. Report and Demonstration of a Case.—Charles Mogan McKenna.
2. The Ulcer Syndrome Without Ulcer.—Alfred C. Croftan.

Discussion.—R. B. Preble, Frederick Tice.

3. Carcinoma of the Large Bowel—Diagnosis, Treatment and Prognosis.—Carl B. Davis.

Discussion.—D. N. Eisendrath.

REGULAR MEETING, OCTOBER 20, 1920.

Joint Meeting With the Chicago Pathological Society.

1. The Pathological Histology of the Lung—Structure in Bronchial Asthma.—Lantern Slides.

Harry L. Huber and Karl K. Koessler.

Presented by Dr. Huber.

2. The Clinical Aspects of Bronchial Asthma. Definition, Pathological Physiology, Pathogenesis, Diagnosis and Treatment.—Karl K. Koessler.
3. The Value of Intra-Nasal Surgery in the Treatment of Bronchial Asthma.—Geo. E. Shambaugh.

Discussion to be opened by Joseph L. Miller.

REGULAR MEETING, OCTOBER 27, 1920.

1. The Care of the Expectant Mother.—Irving F. Stein.
2. An Experimental and Clinical Study on the Functions of the Testicle.—V. D. Lespinasse.
3. "The Peritoneoscope, Pneumoperitoneum and X-Rays in Abdominal Diagnosis."—Benj. H. Orndoff.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

Meeting of March 1, 1920—Continued

Dr. Geo. E. Shambaugh presented a paper entitled: "Discussion of an Old Problem."

ABSTRACT

Dr. Shambaugh introduced his discussion by citing several recent experiences where cases presenting the most elementary clinical problems in otology had been given the wrong advice. This advice always erred on the side of recommending unnecessary operations, because no adequate diagnosis had been made of the patient's trouble. This state of affairs, he stated, is extremely common and is due to the practice of teaching general practitioners the technic of operation before they have spent enough time in the study of otolaryngology to enable them to make the proper examination or to diagnose the condition for which such operations are undertaken.

He contended that they should insist on the minimum of one year full time study before one should undertake the practice of otolaryngology, and that this study should be as much in the fundamental sciences as in the clinical study; that the instruction in operative technic should only be given as the final part of such preparation and not as the beginning, as is now too often done. He pointed out that the general practitioner of the past who attempted to treat all nose and throat cases by spraying and topical applications did no special harm, but that when this practitioner was taught the technic of an operation or two in the field of otolaryngology, the way was open at once for immeasurable harm because of unnecessary operating, unless they saw to it that he devoted enough time to the study of the subject to enable him to diagnose the condition for which such operations were undertaken.

DISCUSSION

Dr. Norval Pierce hesitated to open the discussion because Dr. Shambaugh was quite conversant with his views on the subject. The frequency with which the profession was brought in contact with cases that shows the crassest kind of ignor-

ance regarding diseases of the ear, nose and throat, especially of the ear, was pitiable and a matter of considerable importance. The war had disclosed the fact that a large percentage of men who claimed to be fitted for entrance in the oto-laryngological sections of the Army were ignorant of the elements that go to make up a specialist in that branch. The cause for this was twofold: first, the lack of facilities for training oto-laryngologists in this country and abroad and, second, the commercial spirit of the age. If a man could learn the technic of tonsillectomies, he cared very little about the diagnosis of cases that would give him some idea regarding the advisability of tonsillectomy. If he could learn the technic of any operation, the fact of whether or not it was necessary to do that operation was pretty far back in his mind. The man with a family and no other means of supporting them than that which he got from the practice of medicine was a very human individual. It was easy in certain cases for the fee to turn the judgment in the direction of the operation—there was no doubt about that. Therefore, training in this specialty not only enlightened a man, but built up his character. A man who really had as much knowledge as could be obtained in these matters was a good deal better man as regarded his medical character than the man who had only a smattering. He did not blame the men especially, the foundation of the trouble was ignorance, not dishonesty.

Dr. Pierce believed with Dr. Shambaugh that the time was rapidly approaching when facilities would be extended to men to fit themselves for a beginning in the practice of otolaryngology. One year of intense study was the very shortest time that should be devoted to this preparation. He believed they should begin with the teaching of anatomy and physiology, and with the physics of the specialty, if necessary. Graduates should not be admitted to the latter part of the course, which comprised clinical work, diagnosis and operations, until they had had preparations in the fundamentals. In fact, he thought it would be well for men in different parts of the country to get together and make certain requirements in this line. There might be an exchange of privileges—a man could take the first three or six months in one university and complete the course in some other university, but the whole thing had to be formulated. The fact that the post-graduate course of six weeks was being abandoned in many directions was a sure sign that it was about to pass away.

Dr. Otto T. Freer thought the poor opportunities offered in America for graduate medical study were largely the reason for the imperfect preparation of the specialist here. This would not be helped by prolonging the course or calling it a "university" one. Unless the teachers were so well paid by endowed or state schools that they could get as good a remuneration from instruction as from practice, and so seriously and methodically devote themselves to teaching, our graduate schools would continue to furnish a superficially taught product. One of the greatest lacks in graduate teaching was sufficient, and above all, properly preserved cadaver material. The formalized mummies whose tissues had been hardened into leathery homogeneity that are given our students are nearly worthless as anatomical material. What made Vienna the foremost graduate school of the world was largely the immense supply of fresh or well prepared bodies for all classes of study, and the abundance of available clinical material not walled off from usefulness by vote seeking politicians. What gave the profession in Vienna its authoritative position was that the State was back of it. Our medical profession will not be able to enforce the respect that will give it the teaching material needed for graduate study until our private medical schools are eliminated and the doctor is a State or Federal product endowed with the authority of Government. This is very well exemplified in Michigan, where the graduates of the State University are looked up to with noticeable deference by the people of the State.

Dr. Eugene R. Lewis (Dubuque, Iowa), said he thought it was a fruitful subject for discussion and thought, although it was nothing very new. The same problem had always been present in one form or another. The time was when, if a boy decided to go into medicine, he allied himself with a

man who was already in medicine, and after a time he was in medicine, too. These conditions were not satisfactory, and finally certain requirements were stipulated for the degree of M. D. Then arose abuses, the M. D. "diploma mills."

He had heard one of the older Triologic members tell how he became a specialist, how very crude his entrance was into the specialty, and yet there was then no other avenue of entrance. He thought another stage in development had now been reached, following a natural course of evolution. The problem was not easy to solve. He asked Dr. Shambaugh if the idea that he had in mind was that a man should go into the study of oto-laryngology without an underlying foundation of years of practice. It was a very difficult problem to decide just how much general work a man should have before taking up special work. Everyone had seen the unfortunate narrowness of the man who was "only a specialist," he who had entered his medical school with the intention of becoming a specialist, and had gone through with only perfunctory compliance with the required subjects in the curriculum, but intent only upon his specialty. He thought those men were not capable for the highest type of special practice; for this, he believed, it was desirable that a man should have a university degree, a medical degree, an internship in a good general hospital, and then the practice of general medicine for a certain length of time before becoming a student of oto-laryngology. This was a big requirement, but the man who did not do it could not be the highest type of oto-laryngologist, for a background of general medicine was necessary for the highest type of any specialty. The profession is not up against a new problem at all, and the present generation would probably not see the solution of the problem.

Dr. George W. Boot thought a slightly different view should be taken, which was that if the undergraduates were better instructed in ear, nose and throat work they would demand more of the specialist when they got out of school. The better prepared the student was in medicine, the better prepared the oto-laryngologist would have to be to get his work later. If sufficiently well founded in oto-laryngology, there would be no danger of his sending his work to a poorly equipped specialist, for he would know a well-equipped specialist when he saw one.

Dr. J. Holinger thought the proper training of specialists was a question which must be solved, and all means for its solution must be made of. For example, the facilities in Cook County Hospital ought to be taken advantage of. But under the best conditions, there would be different opinions of different men on the same cases, and, therefore, different treatments.

Dr. Shambaugh (closing) said that where nasal conditions existed which in themselves required correction, they should, of course, be taken care of, but what he wished to emphasize was that the existence of some irregularities of the nasal septum or the fact that the patient had a nose at all, or tonsils, seemed to be sufficient in the minds of many to associate these conditions with ear trouble and to justify operations upon the septum and tonsils.

The question of internes operating upon the nose or throat was a very important one. They were all anxious to do everything they could to develop internes while they were in the hospital. The question of teaching them a technical operation like the septum operation or the tonsil operation binged on this point: Had they a right to teach people to operate who were not prepared to diagnose the conditions for which they were operating? The decision as to whether tonsils should be operated upon hinged upon a number of important relations. The decision in many cases could not be reached without a post-nasal examination. No interne that he had ever seen had ever acquired ability to make a post-nasal examination. The decision to operate upon tonsils and adenoids was often made because of conditions found from an otoscopic examination. Dr. Shambaugh did not believe any interne ever acquired enough skill in making an otoscopic examination to determine the existence of those conditions which indicate adenoid and tonsil trouble. He believed with Dr. Holinger that these operations should be in the hands of resident specialists, and could see nothing but harm resulting

from training a general practitioner in the technic of a nose or a throat operation.

As to Dr. Lewis' question regarding how much experience in general practice a man should have before taking up a specialty: there was no denying the fact that if a man practiced general medicine for five or ten years he was, in a sense, better qualified to practice in any special field than he would be if he went directly into this line of work from his hospital internship. In the same way, a man would be a better laryngologist and otologist if he had five or ten years spent in neurology, etc. It was only another way of stating that a man would be a better specialist if he knew everything there was to know about medicine; but it was evident that this was not possible and that they must have some rational basis upon which to work. In Dr. Shambaugh's opinion, a man who took up a specialty should be a graduate from a first-class medical school and should have an internship in a general hospital: but he questioned the advisability of expecting these men to spend five or more years in general practice before starting on their special work, which meant, as a rule, from two to three years' preparation.

The solution of this problem would be by cooperation. This was the great advantage of specialization. They did not look with approval upon a general practitioner who attempted to tinker with the specialties. In the same way, the internist had as much justification for disapproving of the specialist attempting to practice general medicine. Their best results were obtained by working in cooperation with men who were specializing in the various lines of medicine. For example, the decision as to whether tonsils should be removed was not one that could be decided in all cases by a man doing the nose and throat work. In many cases the decision hinged upon whether the patient was suffering from a systemic infection, and also upon whether there was any other likely focus which might account for the systemic symptoms. In other words, the decision to operate was very often better made by the internist than by the throat specialist.

(To be Continued.)

DE KALB COUNTY

On Wednesday, Oct. 27, 1920, the DeKalb County Medical Society met at the DeKalb County Infirmary with twenty-one members present. Mrs. James Darnell served a sumptuous banquet at 12:45 p. m. Following the dinner the meeting was called to order by the president, Dr. C. H. Wilkinson. The following program with the presenting of the patient then took place:

1. "The Saving of the Foot Function in a Child by Skin Grafting."—Dr. L. E. Barton.
2. "A Case of Addison's Disease Following a Streptococcus Sore Throat."—Dr. John P. Kane.
3. "A Case of Argyria."—Dr. Clifford E. Smith.
4. "Encephaloid Carcinoma of the Left Breast With Metastasis to the Left Orbit."—Drs. H. G. and R. A. Wright.
5. "Pulmonary Infection by *Sporothrix Schenkii*."—Dr. F. LeBlanc.
6. "Cases of Bone Cyst, Consanguinity, Multiple Sarcoma, Lymphatic and Spleno-myelogenous Leukemia."—Dr. J. S. Rankin.

The following officers were unanimously elected for 1921: President, Dr. J. W. Ovitz, Sycamore; vice-president, Dr. H. L. Brooks, DeKalb; secretary-treasurer, Dr. C. E. Smith, DeKalb; censor for three years, Dr. A. D. Blagden, Sycamore; delegate for two years,

Dr. C. B. Brown, Sycamore; alternate delegate, two years, Dr. S. L. Anderson, DeKalb.

FULTON COUNTY

Canton, Ill., Oct. 12, 1920.

The twenty-third annual meeting of the Fulton County Medical Society met in the Auditorium of the Y. M. C. A. building and was called to order at 2:00 p. m. by President Coleman.

Minutes of July meeting were read and adopted after adding the name of Dr. S. A. Oren to the list of members present.

The president appointed Drs. Shallenberger and Chapin as auditing committee, who reported favorably on the treasurer's report.

Treasurer's report was read and adopted.

The following officers were elected: President, Dr. R. P. Grimm, Farmington; first vice-president, Dr. L. R. Chapin, Canton; second vice-president, Dr. S. A. Oren, Lewistown; secretary-treasurer, Dr. D. S. Ray, Cuba; necrologist, Dr. P. H. Stoops, Ipava; board of censors, Dr. C. N. Allison, Canton; membership legislative committee, Dr. E. W. Shallenberger, Canton; public health, Dr. C. D. Snively, Ipava.

Shallenberger and Allison moved that the membership committee be dropped from the list of officers to comply with the By-Laws of the Illinois Medical Society. Carried.

Dr. Harry C. Blankmeyer of Springfield presented the subject: "Acidosis and a Safe Method of Treatment in Infants."

Dr. R. P. Grimm of Farmington presented a paper on "Influenza," and Dr. H. G. Herschle one on "Hemophilia With Case Report."

Fifteen members and one visitor were present.

D. S. RAY, Secretary.

ST. CLAIR COUNTY

Our October Meeting.

The regular monthly meeting of the St. Clair County Medical Society was held in the Chamber of Commerce rooms, Murphy building, East St. Louis, Ill., October 2, 1920, 8 p. m. Eighteen members and three visitors were present.

Application of A. M. Aszmann for membership was read and referred to board of censors.

Moved and seconded, that amendment to by-laws, as appearing in minutes of previous meeting, be adopted. Carried.

Moved by Dr. Skaggs, seconded by Dr. Lillie, that the Society approve the action of the Belleville branch in electing A. L. Muiren to membership. Carried.

Moved by Dr. Skaggs, seconded by Dr. Lillie, that the Society request all free clinics not to receive patients, if they do not present a letter of request for service from some physician or an approved charitable organization. Carried.

Doctors Arbuckle, Short, Hanson, Miller and E. McQuillan were appointed as a committee to arrange with clinics for co-operation.

Dr. Short read a paper on "Tonsils as Foci of Infection."

Dr. Milstead read a paper on "Teeth as Foci of Infection."

Dr. Miller read a paper on "Accessory Sinuses as Foci of Infection."

The papers were very interesting and instructive. They were discussed at length by the members.

No further business appearing, society adjourned.

WALTER WILHELMJ, Secretary.

The following resolutions were adopted by the Belleville branch of the St. Clair County Medical Society: Belleville, Ill., Oct. 9, 1920.

WHEREAS, Destiny has taken from our midst Dr. Washington West, an esteemed colleague and brother in medicine, be it

Resolved, By the St. Clair County Medical Society, Belleville branch, that we deeply mourn his loss.

Dr. West was a lovable character, of a sunny disposition, devoted to his profession and patients, conscientious in his work, kind to his patients and ever ready to respond to the calls of distress and of those in pain and suffering. Be it further

Resolved, That these resolutions be forwarded to his family, as a token of respect to his memory. Be it further

Resolved, That these resolutions be spread on the minutes of the St. Clair County Medical Society.

Belleville Branch,

DR. E. P. RAAB,

DR. ADOLPH HANSING,

DR. C. P. RENNER,

Committee.

Personals

Dr. J. R. Kenton of Litchfield is said to be recovering from an operation for gall stones.

Dr. and Mrs. Charles Adams and Dr. Charles Gordon Fuller have sailed for Honolulu.

Dr. John J. Killeen has returned to Chicago following an extensive tour of the hospitals in Europe.

Dr. John Shore of Sailor Springs has returned from New Mexico greatly improved in health.

Dr. H. R. Gledhill of Jerseyville is said to have undergone a serious operation in a St. Louis hospital last month.

Drs. J. W. Alexander of Charleston and C. R. Harwood of Janesville are remodeling a building in Oakland for a sanitarium.

Dr. H. M. Swift of Mt. Vernon is reported planning a ten-room maternity hospital to be open to the physicians of the city.

Dr. Warren J. Murray of Jacksonville has

been appointed assistant superintendent of the Dixon State Colony.

Dr. H. H. Henning, former associate physician at Dixon State Colony, has been transferred to Lincoln State Hospital.

Dr. Della Caldwell of Carbondale, who was recently named on the staff of the Western State Hospital at Hopkinsville, Ky., is said to have resigned to continue practice in Carbondale.

Dr. and Mrs. Casey A. Wood have gone to British Guiana for the winter. Dr. Wood plans to conduct some researches on the comparative anatomy of the eye, with special reference to birds.

The advisory health committee of East St. Louis have made the office of health commissioner, filled by Dr. C. W. Lillie, a "full time" position at increased salary. They also appointed a food inspector and passed an order regulating heat in apartments.

News Notes

—A \$35,000 addition to the Illinois State Hospital at Watertown is said to be planned.

—The auto bandits got Dr. G. A. Sihler's machine from the garage at Litchfield.

—The board of supervisors of Champaign county are reported to have approved an appropriation of \$90,000 for a tuberculosis sanitarium.

—Contract is said to have been let for a twelve-room addition and a chapel for St. James Hospital at Pontiac.

—A county tuberculosis sanitarium is to be voted on by the people of Montgomery county on Nov. 2nd.

—Dr. Edmund J. Burke of La Salle was held up by masked robbers last month and relieved of his roll.

—The Sisters of Mercy, now conducting St. Mary Hospital in Champaign, are about to erect a new Mercy Hospital one block from the University of Illinois field.

—Dr. E. E. Hagler of Springfield is said to have suffered a loss of \$50,000 when his beautiful home was destroyed by fire a few weeks ago.

—The Anti-Tuberculosis League of Jackson-

ville elected Dr. H. C. Woltman as president to succeed Dr. Josephine Milligan Oct. 12.

—Dr. John G. Massie of Belleville is said to have been indicted for the fraudulent sale of stock in an oil company. It is said that he was a victim to promoters as well as his friends to whom he sold stock.

—Dr. James M. Juvinal, Weldon, is reported to have pleaded guilty to a charge of issuing whisky prescriptions without previous examination and was assessed a fine of \$500 and costs.

—It is reported that Drs. Cornelius J. Donovan and Walter K. Hoover, Lovington, pleaded guilty to charges of violating the Harrison Narcotic Act by failing to keep records of prescriptions on blanks provided by the government for the purpose. Both were fined \$100 and costs.

Mr. Asa Bacon, superintendent of the Presbyterian Hospital in Chicago, was elected treasurer of the American Hospital Association at the recent meeting in Montreal. The Rockefeller foundation presented the association with \$15,000 and will duplicate the amount later under certain conditions.

—Loyola University School of Medicine initiated a series of popular lectures on mothercraft, Monday evening, October 4. The full series of twelve lectures will be given, one on each Monday evening from now until December 20, inclusive, at the school, 706 South Lincoln Street. The lectures are free, and interested persons are invited to attend.

—The voters of Lake County will be called on at the November election to decide whether or not a tax shall be levied for the establishment and maintenance of a tuberculosis sanatorium, according to a decision recently reached by the board of supervisors. The county already owns the Lake Breeze Sanatorium, but very little use has been made of the facilities there.

—The Tri-City Medical Society gave a banquet September 30, at the Masonic Temple, Granite City, in honor of Dr. Julien W. Scott, Venice, one of the oldest members of the society. Practically all members of the medical profession of the surrounding towns were present at the banquet, including Dr. Edward W. Fiegenbaum, Edwardsville, past president of the Illinois State Medical Association.

—Voters of Madison county at the general

election will have submitted to them the proposition of a special tax levy of $1\frac{1}{2}$ mills on the valuation to be used for the erection and maintenance of a county tuberculosis sanitarium.

—It is reported that the State Supreme Court has denied the appeal of Dr. Lillian Hobbs from a sentence of fourteen years imprisonment imposed after conviction on the charge of causing the death of Alda Christopherson by a criminal operation.

—At the annual banquet and election of officers of the Chicago Gynecological Society, held October 15, at the Illinois Athletic Club, the following officers were elected: President, Arthur H. Curtis; vice presidents, W. C. Danforth and Carey Culbertson; treasurer, Charles B. Reed; editor, W. A. N. Dorland; pathologist, S. S. Schochet, and secretary, Joseph L. Baer. The annual award of the society in the form of a check for \$100 for the best paper presented during the year was voted to Dr. S. S. Schochet for his very exceptional piece of original research presented before the society at its March meeting and entitled "The Physiology of Ovulation." The chairman of the committee on award, Dr. Emil Ries, in announcing the decision, laid emphasis on the permanent value of this article as a real contribution to the subject.

—The United States Civil Service Commission announces an open competitive examination for anatomist. A vacancy in the office of the Surgeon General, Army Medical Museum, Washington, D. C., at \$1,600 a year, plus increase granted by Congress of \$20 a month, and vacancies in positions requiring similar qualifications, at this or higher or lower salaries, will be filled from this examination, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion. Applications (on Form 1312) will be received till December 7.

—At a meeting of the Institute of Medicine of Chicago, October 29, Prof. Graham Lusk, New York, delivered the first Pasteur Lecture on "Some Influences of French Science on Medicine." Professor Lusk was entertained at dinner at the City Club before the meeting.

—Plans are under way for an international health and sanitation exposition, to be held at the Coliseum and Annex, November 24 to 29. Dr. John Dill Robertson, city health commissioner, is director-general of the exposition, and

the State Department of Health and a number of health agencies and organizations of the city will cooperate in a visualization of the value of health campaigns.

Marriages

EDMUND LENNON QUINN to Miss Etta Anna Happel, both of Chicago, September 15.

EDWARD ARTHUR BRUCKER, of Chicago, to Miss Margaret Kremer, of Fond du Lac, Wisconsin, October 13.

Deaths

WALTER SCOTT JAMES, Chicago; Rush Medical College, 1893; died September 20.

ALBERT LAURANCE FARR, Evanston, Ill.; Rush Medical College, 1880; aged 71; died October 6.

JOHN G. FRANK, Chicago; Rush Medical College, 1868; Chicago Medical College, 1871; aged 86; died October 17, from lobar pneumonia.

CHAMBERS A. McLEAN, Decatur, Ill.; Eclectic Medical Institute, Cincinnati, 1871; aged 88; died September 16.

MORRIS J. MOTH, Chicago, Hahnemann Medical College and Hospital, Chicago, 1890; aged 67; professor of materia medica in his alma mater; died October 6.

ALBERT E. PALMER, Chicago; Rush Medical College, 1885; aged 68; died October 4, from cerebral hemorrhage.

GERHARD S. SEIM, Blue Island, Ill., College of Physicians and Surgeons, Chicago, 1892; a Fellow A. M. A.; aged 55; died October 4, of pneumonia.

WASHINGTON WEST, JR., Belleville, Ill.; Washington University Medical School, St. Louis, 1897; aged 43; died October 4, from peritonitis.

SAMUEL G. MENGLE, Chicago; University of Pennsylvania, Philadelphia, 1869; aged 70; died October 13, from cerebral hemorrhage.

JOHN PATTISON RIGGS, Media, Ill.; College of Physicians and Surgeons, Chicago, 1895; aged 76; a member of the Illinois State Medical Society; died at the Burlington (Iowa) Hospital September 23.

HOWARD MOORMAN, Christopher, Ill.; St. Louis College of Physicians and Surgeons, 1906; aged 51; a member of the Illinois State Medical Society; died October 1, from heart disease.

ADOLPH GEHRMANN, Chicago; Chicago Medical College, 1890; aged 52; a Fellow A. M. A.; emeritus professor of bacteriology and hygiene in the College of Physicians and Surgeons, Chicago; superintendent of food inspection and bacteriologist in the Chicago health department from 1894 to 1903; died October 3, from malignant tumor of the chest.

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THE HUMAN BREAST: A PLEA FOR WELL-DIRECTED TREATMENT BASED ON MORE ACCURATE DIAGNOSIS*

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One of the great advances today in the profession of medicine is the changing attitude concerning health and disease. Gradually the emphasis is being placed upon health maintenance rather than upon the cure of disease. Coincident with this comes a nation-wide campaign along health lines, the hygienists advocating examination at definite intervals for the early detection, recognition and treatment of disease.

In the industrial and mercantile world the value of good health, from an economic standpoint, is being recognized, and there is a tendency to apply the efficiency expert in medicine, surgery and sanitation, as well as in various business and industrial pursuits. Many insurance companies, merely as a matter of business, are retaining corps of physicians and nurses to help prevent serious illness and possible fatality by the early detection of disease. The United States Bureau of Mines is constantly making experiments in an effort to lower sickness and mortality rates among miners, factory workers, and laborers of all classes. National, state and local boards of health are repeatedly stressing the importance of preventive measures. In special fields the American Association of Cancer Prophylaxis is one of the many organizations doing very useful service. Other agencies are emphasizing these points, but the examples quoted are sufficient to prove the trend of our times.

Thus, from these many sources, the public is urged to consult the physician at any deviation from the normal—in fact, it is asked to come

from time to time, even though there is no evidence of disease. It is recognizing the force of these arguments and is slowly responding. The patients who come justly demand a recognition of all the aspects of the individual case.

The medical profession must be keenly alive to the importance of developing its ability to diagnose cases in their early stages. At times it has the unfortunate attitude of under-estimating minor conditions and mentally pronouncing the symptoms merely those of hysteria. Physicians should not be so engrossed with acute illnesses, acute conditions, and more advanced pathology, as to fail to realize the importance of a thorough examination of all patients who seek medical care and attention, no matter how trivial the complaint may be for which they come. Early detection of an almost hidden danger signal may result in sparing the patient much future mental and physical suffering.

There is also the danger of over-estimating, as well as under-estimating, pathological conditions. Many can remember the period of the massacre of the ovaries, later of the appendix, then of the tonsils and colon, and more recently of the teeth. Is it possible that in the attempt to prevent cancer there may be the risk of another period of unnecessary sacrifice—that of the human breast? By way of illustration, there is the patient who discovers a lump in her breast and delays her visit to the physician by visioning mentally over his door, a sign which reads, "Abandon hope of escaping a terrible operation, all ye who enter here." On examination the physician may fail to weigh in the balance all the non-malignant possibilities involved, and permit her to leave his office with the belief that operation is the only means of saving her life. Accepting this verdict, the patient may be subjected to an unnecessary mutilating operation for a benign condition.

In contrast, there is the patient who receives, but fails to accept, the advice of radical operation, and who drifts from physician to physician or

*Read at Tri-State Meeting, Waterloo, Iowa, Oct. 4-7, 1920.

from quack to quack for help. When the condition is a benign one the patient may be cured of a so-called "cancer" in spite and not because of the physician's advice, and therefore may be added to the host of those who spare no effort to influence the laity against the recognized profession. She points to herself as a living example of escape from cruel surgery. For this reason, the blanket rule of prescribing radical operation in all doubtful cases may act as a deterrent to those who most need care and observation. Frequently, the short delay in consulting the necessary authority constitutes the difference between the benign and the malignant stages of a tumor.

The public should be taught to come; taught that any lump is a great danger; that to consult a physician is the only safe method; that an examination does not absolutely mean a radical operation. The profession must realize its responsibility and seek to deal with the individual case on the merits of the conditions present, in the light of all that is known to medical science. It should be equipped with all the facts—not those of ten years ago, not those of yesterday, but the facts of today, and adequately be prepared to meet those seekers after truth by having at its command all the established current data of the profession, and then only after deliberate consideration of all the evidence obtainable, render the verdict.

Medical knowledge, concerning breast conditions, is not sufficiently definite to warrant many dogmatic conclusions. There is an accumulation of material concerning which there is much academic disagreement. Information must be unified, standardized, and placed before the laity in a form which is thoroughly comprehensible. Only such vital phases of medical subjects as have received the practically unanimous approval of the profession should be released for the guidance of the general public. It is an unfortunate fact that some of the most eminent authorities disagree on essential as well as on non-essential points. For example, one surgeon states "that every lump which appears in a woman's breast should be removed forty-eight hours after it is discovered."

Another authority says: "When the question arises between chronic mastitis and carcinoma it is usually the safest procedure to remove the breast, and . . . if no malignant process is

found, one has merely removed a menace to the patient."

In comparison, a well-known author writes:

Those who have served apprenticeships in the laboratories of hospitals will admit, and all men of experience know, that frequently radical operation is performed for simple lesions. I have observed this in cases of simple fibro-adenomas, interstitial mastitis, and simple lobulation in a developing breast. Once I examined a pair of breasts, removed from a young woman by a specialist in diseases of children, and to this day I have been unable to find any excuse whatever for their removal. The doctor was in doubt. * * * I believe it is a greater error to subject a young woman with a simple benign lesion to a radical operation than it is to fail to extend to a woman the 20% chance in case of actual carcinoma. * * * The platitude that it is better to sacrifice a dozen suspected breasts than to overlook a single case of carcinoma has long served as a cloak for ignorance of the finer pathological changes in the gland.

Recently, a leading pathologist made the statement

That he based more faith on clinical methods, carefully applied by a skillful person, than on other means of diagnosis at the present time. He said it was a strange fact that the clinician always insisted that the laboratory methods be applied to diagnosis, while the laboratory worker favored clinical methods—palpation, inspection and observation for a period of time, and that he had spent a great deal of time in the laboratory and preferred to base his diagnosis upon careful clinical methods. There was, he supposed, a common ground where laboratory worker and clinician would some day meet. * * * He added: A physician does not impress other physicians or the public by applying the blanket rule to all breast tumors and insisting that every lump in the breast be excised. In distinguishing between malignant and benign tumors of the breast it is important to take into consideration the age of the patient, location of the lump in the breast, consistency of the tumor, history of the organ and all features of the case and in this way one can usually reach the diagnosis. The failure to recognize cancer is often due to lack of proper physical examination.

However, the following radical views from recognized authorities, have also been published:

Cases of *secondary hyperplasia* should be considered as *precancerous*, and while they do not require so extensive an operation as the removal of the underlying muscles together with the axillary glands, yet *no portion of the mamma should be left*.

In the surgery of mammary tumors, I am convinced, however, that to insure the greatest good to the greatest number, would be to *advocate the removal of every tumor bearing breast*.

Every benign tumor of the breast should be re-

moved before it has an opportunity to become carcinomatous. In other words, *it should be removed as soon as recognized.*

At a recent medical meeting a surgeon said:

That he *would today submit every portion of a breast with a blue dome cyst to careful microscopic examination*, and any breast, it made no difference what the gross appearance, where there existed one or a dozen cysts, regardless of the size of the cysts, should always be examined with the microscope. He had seen cysts removed and the patient come back with cancer of the breast.

In answer to this statement, another surgeon responded:

That he did not care how the diagnosis was made, but if a whole breast must be had for examination, how could the breast be saved? The "take out" policy would mean the mutilation of every woman with a lump in her breast.

The foregoing are but a few of the radical and conservative statements, the pros and cons of which must be carefully weighed before any definite conclusion can be reached. To radically remove the breast in all doubtful cases eliminates the development of malignancy for all time, and therefore safeguards the surgeon's reputation, but is this attitude a just or a scientific one? Considering the patient and remembering the number of unfortunate ones who have suffered unnecessary breast amputations, it seems imperative to say that the radical breast operation should be performed only after very careful consideration of all signs and symptoms.

Many patients suffering from cancer come too late, but it is equally true that there are changes of the breast simulating cancer, and these must be taken into consideration before making an accurate diagnosis. The physician must be ever on the watch for the frequent non-malignant breast conditions. Abscess, actinomycesis, catarrh, eczema, Hodgkin's disease, intestinal and other toxemias, ovarian disease, menstruation, disturbed endocrine function, hyperplasia, mastitis, rheumatism, senile hypertrophy, congenital deformity, haematoma, traumatic fat necrosis, syphilis, tuberculosis, simple lobulation in the gland of the young maturing female, and the lumps which are prone to remain in the mammae of the child-bearing woman after lactation has ceased, are causes which often create suspicious masses in the breast region. To these may be added the benign tumors, as adenoma, chondroma, cysts, fibroma, lipoma, myxoma, osteoma,

and their combinations, adeno-cystoma, fibro-adenoma, cystic-adenoma, etc.

During years of practice the writer has examined large numbers of benign breast conditions, many of which were referred to him as malignant. Frequently, he has found it necessary to reduce an inflammatory condition before definitely deciding whether or not there was an underlying cancerous process. Some of the patients had retraction of one or both nipples, and others had one breast higher or larger than the other. By obtaining a full history and with careful observation these conditions were proved to be of congenital origin, and not in any way pathological.

In a recent tabulation of the first 2,000 alphabetically arranged histories in the author's office files, the analysis showed 225 cases of benign breast conditions, and 85 cases of mammary malignancy. None of those diagnosed as benign has, to the writer's knowledge, developed malignancy and all those clinically diagnosed as cancer were proved to be such by pathological examination of the specimen. The following illustrative cases are reported in brief, covering only the points relevant to this paper, not because of the unusual aspects of the cases, but to emphasize the fact that there are many pathological changes in the mammae resulting from disorders in other parts of the body which, without careful examination, might be mistaken for cancer.

NOTE: In a paper read before the American Association of Obstetricians, Gynecologists and Abdominal Surgeons in September, 1920, I spoke of the many breast lumps caused by stasis and read reports of twenty-five cases, some of which had been under observation from fifteen to eighteen years, where the lumpy condition and even well defined tumors of the breast had disappeared under treatment for intestinal toxemia.

1. *Intestinal stasis cause of lumpy breasts*—L. F.: Age 35; female; married; 2 children, nursed both.

Patient consulted me March, 1920, for retraction of and eczematous discharge from left nipple; considerable elongation and lumpiness of the upper, outer quadrant of the breasts; two small glands felt in left axilla.

Previous to consulting me the patient had seen two well-known surgeons, one of whom had advised radical operation, stating to her "that there was no cancer but that the breasts were no good and she might as well have them off." This surgeon also wrote to the family physician: "I would urgently advise removal of both breasts."

After careful examination of the patient, and weighing well all the points, I was convinced that radical

operation was not called for and accordingly recommended as follows: "Under no circumstances at the present time, without a fair trial of preliminary measures, would I submit to operation. After a month of treatment, we can definitely determine what progress has been made."

I then prescribed a brassiere to relieve all pull on the upper, outer quadrant; bicarbonate of soda baths; milk of magnesia internally; colonic irrigations; tonics; wholesome diet; bland ointment on nipples and large quantities of alkaline water, at the same time impressing the importance for frequent examination.

July, 1920, the patient returned for an examination. The lumps in the axilla had disappeared entirely; the right breast was less lumpy; the left breast better; the discharge materially lessened in amount and less irritating to the skin. The eczema about the areola had disappeared; the feel of the breast was almost normal and the general condition of the patient good.

The results already secured in this case make it clear that we have to deal with an inflammatory and not a malignant process.

2. *Stasis breasts.* C. B.¹: Age 37; female; married; no pregnancy.

Patient consulted me February, 1914, for a lumpy condition of the left breast. There was also a mass in the right mamma which a surgeon, whom the patient visited, declared malignant. As the tumor in this breast was well defined, I advised conservative operation. This was done and the pathological report proved my diagnosis of benign neoplasm correct. After operation on the right breast, and medical treatment for intestinal toxemia, the left breast cleared and in July, 1920, the patient reported both breasts normal and her general condition excellent.

3. *Stasis breasts.* A. B.²: Age 25; female; widow; 2 children; nursed both.

Was always constipated and in March, 1915, began to have severe pain in the right lower quadrant of abdomen. In December, 1915, a lumpy condition was noticed in left breast, with bloody discharge from nipple, which was present when I saw the patient in February, 1916. There were also glandular lumps in the upper, outer quadrant of the breast; distinct tenderness in right iliac fossa, along the head of the cecum and over the appendix. X-Ray examination proved this a case of chronic intestinal stasis. After abdominal operation there was a slight discharge from the nipple for one week, after which breast cleared up. Patient is now in perfect health, and breasts are absolutely normal.

Previous to consulting me, this case was diagnosed by several clinicians as cancer, and radical and immediate amputation of the breast advised.

NOTE: It should be remembered that in a large majority of cases some milk remains in the breasts of women who have borne children and especially in

those who have nursed them. It is not the discharge that is important, but the character of the discharge.

4. *Congenital malformation of the breast.* H. S.³: Age 30; female; single.

Patient was operated upon in 1915 for intestinal stasis associated with a general lumpy condition of the breasts. After abdominal operation, the lumps in breasts disappeared with the exception of an enlargement of the second costal cartilage under the right breast, which, previous to seeing me, had been diagnosed as a definite neoplasm. The characteristic feel of this might easily have led one to believe that it was an extension of a cancerous process from the breast. However, after careful observation, I diagnosed it as a congenital malformation. It had not changed in either size or form during my five years' treatment of the case, and when I last saw her, both breasts were normal except for this slight deformity.

5. *Hodgkins Disease of the Breast.* E. N.⁴: Age 32; female; married.

This patient, two years before consulting me, had noticed an enlargement of the thyroid gland and about a year later a tumor appeared on the right side of the neck and another at the upper, outer margin of the right breast, extending into axilla. Six months previous to operation, a piece was taken from the tumor in the neck at a hospital in a neighboring city. The report was lympho-sarcoma, and the case considered beyond the hope of cure by operation. Patient grew steadily worse and exhibited pressure symptoms in the neck. As a palliative procedure, I removed tumors as far as possible, with extensive ligation of large vessels, and applied radium. The pathological report proved the case Hodgkin's Disease. The patient lived for several years, but ultimately died of the disease which had extended into many organs.

6. *Lumpy condition of breast as result of tonsil infection.* S. K.⁵: Age 31; female; married; no children.

First consulted me in January, 1917, for lumpy condition of both breasts. After operation for intestinal stasis breasts cleared entirely and patient made excellent recovery.

In 1919 she had influenza and later developed repeated attacks of infection of the throat. During these attacks the breasts became lumpy and showed a condition of mastitis throughout, as a result of the tonsil infection.

7. *Apparent malignant recurrence.* E. M.: Age about 70; female; single.

In 1909 I removed the right breast of this patient for carcinoma; the left breast had been removed some years previous. Later an appendectomy was performed.

In 1912 small nodules developed on the chest wall

1. Preliminary reports in "Cancer Problem" and "Benign Mammary Tumors and Intestinal Toxemia."

2. Preliminary report in "Woman's Medical Journal," May, 1917, and "Benign Mammary Tumors and Intestinal Toxemia."

*Preliminary report in "Benign Mammary Tumors and Intestinal Toxemia."

4. Preliminary report in "Conservation of the Human Breast," Int. J. Surgery, July, 1915.

5. Preliminary report in "Benign Mammary Tumors and Intestinal Toxemia."

over several of the costo-chondral articulations, near the scars of the breast operations, more marked on the right side. These were considered by several as malignant recurrences. The nodules were diffuse, very tender and painful, especially in cold and damp weather. I made a diagnosis of systemic condition, and not of malignant recurrence. The patient was kept under close observation and given treatment for acidosis. The lumps disappeared entirely, and the patient is today perfectly well.

8. *Eczema of the nipple.* K.⁶: Age 26; female; single.

Patient had lumpy and painful condition of right breast due to pyogenic infection from eczematous ulcer of the nipple, which had persisted for some weeks. Because of the appearance of the breast and enlargement of the axillary glands, her doctor advised removal of the organ for carcinoma. A few days of proper treatment caused the eczema and lumpy condition of the breast to disappear.

9. *Syphilis of the breast.* P.⁷: Age 38; female.

Patient gave a history of having been well and strong until two years before consulting me, when she commenced having pain, more or less continuous, in the upper part of the right breast. Examination showed enlargement of the sternal ends of the second, third and fourth ribs on the same side. This was verified by x-ray examination according to which the pleura and lungs were not involved, and the bone changes not sufficiently characteristic to justify stating whether this was sarcoma or some benign growth. Wassermann and Noguchi tests both proving positive, the patient was placed on iodid and mercury and later given salvarsan followed by mixed treatment. The enlargements, under these measures, disappeared and five years later the patient's physician reported her perfectly well.

10. *Pelvic condition causing lumpy breasts.* A. S.⁸: Age 32; female; single.

Two years before seeing me patient had an operation for a uterine condition. She consulted me July, 1919, for irritation of the bladder, severe pain in back and ovarian region, together with a lumpy condition of both breasts.

Laparotomy was performed, and I found a much enlarged uterus with a considerable number of fungosities, a mass of adhesions which extended back of the uterus down to the cul de sac, a fibro-cystic right ovary, deep in the pelvic cavity, surrounded by a mass of omentum tightly adherent to the uterus in front and to the rectum behind. The mass was about the size of two hen eggs. The operative conditions were corrected, and in August, 1920, the patient reported that the lumps in the breasts had disappeared entirely; she had gained twenty-seven pounds since the operation and was in excellent condition.

11. *Tuberculosis of the breast diagnosed as sar-*

6. Preliminary report in "Conservation of Human Breast," Int. Jl. Surgery, July, 1915.

7. Preliminary report in "Conservation of the Human Breast," Int. Jl. Surgery, July, 1915.

8. Preliminary report in "Benign Mammary Tumors and Intestinal Toxemia."

coma. M. C.⁹: Age 55; female; married; five children.

Examined patient who for three years had a hard nodular swelling in the axilla, with involvement of the breast, and who, during these years, had been operated on for this breast condition twice—a fistula in the axilla following the first operation. When I first saw the case, the mass was nearly the size of the entire breast—painful on pressure. The arm, too, was painful and much enlarged. Two specialists had declared the case advanced sarcoma, one physician telling her family that she could not live beyond a few weeks. The patient was given morphine so that she might be spared as much suffering as possible.

After careful examination I diagnosed the case as inflammatory—possibly tuberculous—and decided to give her a chance by extensive operation. This was done and pathological report proved the diagnosis of tuberculosis. After an uninterrupted recovery she was discharged from the hospital in two weeks.

Two years later she was reported as well, but since that time I have lost track of her.

12. *Disturbed endocrine function causing lumpy breasts.* L. N.: Age 42; female; married; 1 child.

Patient suffered from neurasthenia and hypothyroidism. Her weight increased until she averaged two hundred pounds. There were lumps in both breasts, and pressure on the mammae caused a certain amount of fluid to exude. The history of bloating, the added fat, the heart symptoms and the pigmentation and dryness of the skin all pointed to a disturbance of the internal secretions. Thyroid and multiple glandular secretion were administered and the excessive fat reduced. As long as the patient persisted in the treatment, the lumps in the breast disappeared, but on suspension of the medication they invariably recurred.

In August, 1920, the patient wrote that she was continuously on the multiglandular treatment, that she was in excellent condition, and that her breasts were perfectly normal.

NOTE: In connection with this case, it is an interesting observation that the masses in the mammae, which were relieved on the basis of endocrine dyscrasia, were in the same relation to the gland—upper, outer quadrant—as those resulting from stasis or frequently seen during the catamenia.

Not only should the surgeon endeavor to be so qualified as to recognize the benign and malignant growths of the breast, as far as is clinically possible, but he should also have a very definite knowledge of the principles underlying the methods of examination. He should bear in mind the fact that the very life of his patient may depend upon the way he manipulates the tumor mass. The patient herself, or the solicitous friend, may do damage by manipulating the

9. Preliminary report in "The Cure of the 'Incurable,'" American Medicine, July, 1915.

breast, as may the doctor when he examines the case, or the surgeon when he operates. Nature erects natural barriers to protect the various cells of the body, but pressure along the blood vessels or along the lymphatic glands may cause malignant growths to reproduce themselves in locations other than the original site, by extension through these channels.

Despite all that has been written on the subject of biopsy, it is but a short time since the Board of Health of a large city requested the profession to cut into suspicious lesions—without one word of caution about protecting the patient against the possible spread of metastases—and submit small particles for examination, promising that a report on the tissue would be forthcoming in from 24 to 36 hours. Because of this attitude it seems necessary to emphasize once more the extent to which a patient's life may be jeopardized by biopsy for the purpose of pathological diagnosis. Cutting into a neoplasm of the breast, or any other part of the body, may cause such a dissemination of the cancer, if cancer be present, that subsequent operation will be of no avail. When the growth is at a difficult site, so that it cannot be completely removed and pathological examination is necessary, the danger will be diminished by incising with the canter knife or cauterizing the cut surface—destroying all the cells in the neighborhood and blocking the avenues of extension. A safer procedure is to examine the specimen by the frozen section method. However, there is also a chaotic state in this particular field, for some pathologists refuse to make a diagnosis on frozen section while others feel it is safe to do so.

In the light of present knowledge may not the following conclusions be drawn with safety, keeping ever present in mind the terrible sword of Damocles—cancer of the human breast?

1. The laity is coming earlier, in increasing numbers, for examination.

2. Opportunity for service, on the part of the medical profession is being increased in proportion as the public responds to its summons.

3. The profession must develop a higher degree of diagnostic ability than in the past and possess itself of all the essential facts concerning breast conditions.

4. A judicial attitude must be maintained—careful examination with well poised judgment.

5. Accurate diagnosis of abnormal breast

conditions means and demands a careful systemic survey as well as an efficient local examination.

6. The human mamma may be the seat of changes purely inflammatory or of neoplastic nature, closely simulating malignancy.

7. The relationship between the internal genitalia and the breast has been well established. Correction of abnormal pelvic conditions may ameliorate or relieve certain mammary changes.

8. The relationship between chronic intestinal stasis and certain breast conditions seems to be proved. Toxemia from teeth, tonsils and other parts of the body, may also have its effect upon the mammary gland.

9. Serious conditions are often overlooked while they are as yet amenable to the simplest measures of non-surgical treatment.

10. The use of the terms "breast" and "mamma" as synonymous may increase the difficulties of diagnosis. The writer believes it would be helpful to confine the term "mamma" to the gland with its ducts, including its outlet, the nipple; "breast" as embracing the entire mamma with all else that surrounds it—the skin, fat, fascia, capsule, and the bed upon which the gland rests, the fascia, muscle, and bone with the cartilage, in juxtaposition to the mamma.

11. Any of these structures may be diseased, and a multiple pathology be present, rendering diagnosis more difficult.

12. Abnormal conditions, congenital or acquired, may be present in neighboring structures, and lead to wrong diagnosis of cancer, or if malignant disease is present, lead to the diagnosis of the inoperable and incurable stage although the neoplasm is early and surgically curable.

13. In spite of present knowledge, it is impossible at times to arrive at an immediate accurate diagnosis. In justice to the patient it may be necessary to keep her under careful observation, treating general conditions, before proceeding to radical surgery. If then mistakes occur, it should be the earnest endeavor of the profession to make them fewer and fewer.

14. It is reasonable to assume that with the early recognition of some lumpy conditions of the breast, followed by adequate systemic treatment and mechanical support, underlying factors of malignant disease may be removed.

15. A question naturally arises: If all the foregoing is true, may it not be that in that

multiplex disease grouped today under the term "cancer," there are possibly causative factors underlying malignant disease in the toxæmias and the heterological activity of the endocrines? This seems to be a very promising field of research.

16. When cancer is present beyond a reasonable doubt, radical surgery is absolutely indicated.

To allow a patient to drift beyond the hope of surgical cure is a terrible tragedy; to unnecessarily and radically remove a woman's breast may be a profound calamity. With a deep sense of the limitations in the art of exact diagnosis and of the greater responsibility today in the enlarging field of service for humanity, let the profession ever be guided by the watchword, "Not Fears but Facts."

DO OUR LEADERS LEAD? IF SO, WHITHER?

THOMAS P. FOLEY, M. D.

CHICAGO

In the consideration of this question I take the position that our "medical leaders" do everything and anything but "lead." In this paper, I intend, briefly, to present certain sins of commission and omission on the part of our "medical leaders." At its conclusion I will let you decide whether or not our "leaders lead."

A leader most commonly is defined as "one who leads." Fundamentally, to lead it is necessary to have someone or something to lead. In another sense a leader may be looked upon as a guide or one who watches over the safety and comfort of those in his charge.

It is just and right that if someone or something makes a leader of an individual then that person who becomes a leader should advance and protect the material interests and comforts of those who make him a leader. His position is the same as that of the captain of a wrecked vessel who sticks to his ship until all his passengers are safe or at least as safe as he can make them.

Having briefly sketched the position of a leader, let us revert to our "medical leaders." Let us consider how they have failed in that duty of leadership which demands seeking and protecting the economic interests of the rank and

file. Let us consider how little they have done for the protection of the material interests of those engaged in general practice or of him who has finished an internship and is about to engage in general practice.

I make the following charges, viz.: 1. Absolute failure to raise their voices in the legislative halls of the city, state or national government to protect the interests of regular medicine against the encroachments of the cults and opathies and Christian Science with its allied frauds and burglaries. 2. A wishy-washy, spineless attitude whenever or wherever a feeble voice has been raised for the material interests of the rank and file in attempting to secure decent compensation for efficient service. 3. The "double code of ethics" which makes the newspaper advertising of the "leader" a tribute to his leadership, but which limits the newspaper publicity of the average medical man to his obituary notice. 4. The formation of the great public clinics, where, after due newspaper publicity to the great and mighty who are founding the institution has been given, the gullible of the rank and file are permitted to give their time and devote their talents to the treatment, not so much of the "worthy poor" as of the "wise sick" who know where they can get medical and surgical service gratis. 5. The issuance of "cut rates" in the work done for various corporations, including the accident insurance companies. 6. The formation of various oligarchies in surgery and medicine whereby self-elected and self-selected medical aristocrats (many of whom, by the way, were so superior to the rest of us that they gained their medical knowledge in a two-year course of sixteen weeks a year and never served an internship) may regulate everybody else and decide who shall practice medicine or surgery—even after an examination and the issuance of a license by the State Board of Health.

As there probably is a time limit on this paper, instead of running the entire gamut of charges in crimes of commission and omission, let us consider those mentioned above.

On the question of the protection of the profession in securing adequate laws or the defeat of obnoxious ones, have "our leaders" ever been in the thick of the fight? If you do not know, ask some of the medical men who have been in the

fight. In the Constitutional Convention at Springfield how many of them appeared or even wrote or telegraphed in the effort to secure the passage of Proposition 300? If you are not familiar with the subject, ask those who did make the fight for this and other legislation.

At the present time with that foul bird, Compulsory Health Insurance, and the still more loathsome beast of prey, State Medicine, stalking in our midst, both of these menaces to the profession have the support of some of our brethren who are so well fixed with this world's goods that these measures are supposed to interest them, not from the standpoint of the medical profession but on the hypocritical grounds of the "welfare of humanity." Turn to your ILLINOIS MEDICAL JOURNAL for June, 1920, and read what some of your "leaders" are preparing for you under the subtle title, "Nationalization of the Agencies for the Health-Welfare of the People." Read that and then figure where the medical profession is going to land if they blindly follow the "lead" of the "leaders."

In the coming session of the Illinois legislature the medical profession will probably be looking for an amendment to the present Workmen's Compensation Act. If the amendment is secured it will mean an increase of income to the average medical man. When the question does come up, I ask you to keep a weather eye on our "leaders" to see how active they will be for a measure which will help the rank and file.

On the second charge, have you ever noticed, when something has been proposed for the advancement of the material interests of the profession, the enlightening "hush" from those who should lead. Have you noticed the cold water they throw when some interest other than their own is advanced.

And the "code of ethics," which was made for the government and control of the "little fellow," but which permits the announcement of the many achievements of the "leader" in the public press and lay magazine.

At a recent meeting of the Council of the Chicago Medical Society, a surgeon, in discussing a decision of the Ethical Relations Committee, stated that frequently after a surgical consultation the family preferred the surgeon to the original physician. Naturally the consultant *had* to take the case. Here is your "ethics" with reverse English. If the "little fellows" only

had a card index of the consulting surgeons who regard the general practitioners as a mere "reference bureau," they could soon take some of the "lead" out of the "leaders."

One the West Side not long ago, a general practitioner diagnosed and made preparation for operation upon a case of acute appendicitis. He made the very reasonable operating fee of \$100, which the family were well able and willing to pay. The man of the house being at work was called on the telephone and advised of the condition at home. On asking his employer for time off and giving his reasons, the employer advised calling his physician, one of "our leaders." This fellow went out to the West Side, saw the case, removed the patient to his hospital and did the entire job for twenty-five dollars. The original physician was not dismissed, but was left to sit in his office waiting for the call which never came. Of course, a case like this is not covered by the "code." Or is it?

Take the formation of the great public clinics where all may receive the desired treatment from the medical profession. While the names of the list during the formation of the public benefaction are high and mighty, the stokers who keep the fires going in the clinics are the "little fellows," but they, being bound by the "code," are unmentioned. Not long ago the newspapers announced that at a certain dispensary the "poor public" had received about five million dollars' worth of medical advice. Anyone who knows about dispensaries knows that a good percentage of the five million was diverted from where it should have gone—to the medical profession.

If we think the general public is getting off cheap at the hands of "our leaders," figure some of the "cut rates" they hand corporations. At a meeting of the Contract Practice Committee, an adjuster for an insurance company cited the case of a man who fell from a building, rupturing his spleen, tearing the attachments of the liver and rupturing the gut. The case was operated on by a skilled man. The adjuster stated that the operation of repair occupied most of an afternoon. The skilled operator figured his afternoon's work and the accumulated skill of years at \$110. The adjuster was telling this to show the alleged nerve of a general practitioner who had charged \$75 for the reduction and splinting of a fracture. Do you know that insurance companies have on their operating staffs men you look upon as

"leaders" who do an operation for strangulated hernia with all after care for seventy-five dollars? Then do you wonder the fight the "little fellow" has to collect a reasonable fee for his work.

Consider our aristocracies in medicine and surgery. Go over the names of the founders and perpetrators. Do you imagine you will find the name of a single one who has done anything beyond advancing his own selfish interests?

Not long ago a member of the Stock Yards Branch had an idea. He printed a "fee table" which could be framed. He mailed it to physicians. He received a rather unpleasant caption to the notice about his activity in the *Official Bulletin*. Some years ago another physician had an idea. He would pass upon the qualifications of our surgeons. The elect would be knighted—the impure cast out. Did he make the mistake of charging one dollar for this privilege? He did not. He made the opening bet twenty-five dollars, which has since been raised, and a yearly renewal fee or bath to keep the surgeons pure. Was he exposed as buncoing the medical profession? He was not. He was and still is looked upon as a "leader."

If one had the time or the inclination he could go on indefinitely. Every one of us knows that "our leaders" do not "lead." What can we do to remedy this evil? In some instances nothing. Some of them through the connivance of the heart and the head are independent. Some we have made independent. Some we are frantically trying to make independent. In the future, before we boost anyone on to the pedestal of leadership, let us put them to the test. That test should be one of their stewardship to the medical profession. Let us consider whether or not they have used the opportunities and devoted their talents to serving the best interests of the profession.

Get away from the mawkish sentiment that whenever or wherever a medical man raises his voice that he has an axe to grind or that he is a politician. Get a little more politics into your own systems—at least enough to learn to protect your interests. Instead of backing the medical men who have been waging your fight, you sit back, or when you talk of them, it is to carry tales.

The Talmud says: "The soldiers fight but the Kings are the heroes." We, who bear the brunt

of the battle, had better wake up or the Kings will ask us to fight on empty bellies.

25 E. Washington St.

THE ACCIDENT COMPANY, THE DOCTOR'S JINX*

W. F. GRINSTEAD, M. D.,
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CAIRO, ILL.

The most staggering blow to the efficiency of the healing art as well as the greatest humiliation to the medical profession that the present and last centuries have administered, have been the Compulsory Health Insurance Acts which fell like a blight on some European countries, especially Great Britain and Germany. It is a species of socialism that discriminates against those who attempt to guard the health and lives of the people. It has been truly said that "The Nation's Health is the Nation's Wealth." It might be as truly said that the Nation's health is the mainspring of the Nation's happiness.

Without health, wealth and happiness, life is not worth living. It seems passing strange that the contingent in modern progress who have so closely approached the miraculous in promoting these essentials should be menaced. At this time, however, it is not my purpose to enter the discussion of the menace of compulsory health insurance which is receiving so much attention and serious discussion in and out of the medical profession. My purpose is to bring to your attention briefly that unjust and greedy exploitation of the medical profession by the accident insurance companies. To my way of thinking these money-getting organizations are, in this country, the closest approach to the health insurance vampire of Great Britain. For many years I have been quietly defending my profession against these imposters, largely single handed and alone. I have not paraded my activities before the medical societies nor sought their co-operation as I probably should have done.

I am so averse to medical society rows that I have confined my work in these associations to the consideration, presentation and discussion of scientific subjects. In going it alone I have incurred the maledictions of accident companies; I have lost much of their business and whatever

*Read before the Southern Illinois District Medical Association at Carbondale, Ill., November 4, 1920.

profit went with it; but have had that satisfaction that comes to a martyr in the cause of right. I have not aired my sacrifices nor sought sympathy nor co-operation. My colleagues who have profited by my sacrifices in fighting their battles do not even know that I have promoted their prosperity.

It has been reward enough for me to know that I have advanced the interest of my profession and could afford to make sacrifices which some of my colleagues could illy afford to incur. Some of my professional neighbors are now doing the accident surgery for manufactories and industries whom I formerly served and they tell me they are getting local fee bill rates for their services. For my services I had been offered fee bills prepared and submitted by the accident companies, but I refused to accept them.

In some instances they got service at their cut rate, not to say a starvation rate, by professional men who wanted more business and thought there was some prestige before the people in being known as surgeon for these industries. The public did not know that they were not employed by the companies whose employes they treated.

I am assured by a medical man of veracity who now serves a large employing company whose accident company's fee bill I turned down, after some sharp correspondence, that he is getting local rates. It is better for my profession that he have the work and the pay at a fair remuneration approved by the County Medical Society than for me to have it at a cut rate and, under the circumstances, I am glad he has it. The accident company was unwilling for me to have the work after I refused to let them skin me. In another instance an accident company sent me a series of forms to fill out for them, not for the employing company. I refused to fill them out unless the accident company paid me for my time and labor for their protection. They sent two of their men to see me so that they would have two witnesses to my statements. I told them I would prefer to lose the business rather than allow them to impose on me and rob me of my time and labor. They said, "Didn't we pay your bill for service to the employe?" "Yes," said I, "but that is not what we are talking about. You want me to furnish you a lot of evidence of injury in detail, showing nature, extent, location, probable length of disability; if any part of disability will be permanent, what per cent of per-

manent disability. You want to know if disability is partial or total; when he was able to do part of his work, when he could resume his regular occupation. You want to know if he is suffering from an old injury or disease that will render him liable to get hurt again, or prolong his disability if he should sustain an injury. You want a preliminary report of the injury; you want a final report; you want intermediate reports of progress; you want to know the cause of delay in recovery. You tell the patient and me that this detailed information is for his benefit and enables him to collect damages if he is entitled to any. The patient insists that all this information is for your benefit and protection and he is under no obligation to pay for it and refuses to do so. You refuse to pay me and are liable to drag me into court to help you beat my patient. Now, I am willing to give the employer and the patient the facts in the case, but if I give you all the information you ask for and fill out all these blanks for your file you must pay me for my time and labor like other people do."

Another doctor got that job, although the employing company and patient were much pleased at the results secured and the character of service rendered. This corporation wanted me to take care of their employes because they knew what kind of service they could always get; but they didn't want to break with the accident company which they believed was saving them money.

These are two concrete examples of exploitation of the medical profession by the accident companies, who make money for themselves by driving hard bargains with others. First, a grudging, penurious fee bill of their own making; second, proof of injury in detail for their own protection without any cost to them whatever. The doctor must go hungry, a victim of greed.

Listen to another incident in my personal experience. This brings up a question upon which some of my colleagues may take issue with me. I was handling the surgical end of a large industry that employed many people. I was rendering bills according to local rates. Everything appeared to be running smoothly. Employers and employees were pleased and I really believed I was giving "up to the minute" service. An agent of an accident company butted in. He stopped me on the street one day to say that his company had taken over the accident liability of

the company I served. He wanted to know how much I would charge to take care of the injured employees. This question at once opened up the old controversy of rates. Many medical men conscientiously believe and openly declare that corporations are better able to pay local rates for service than most individuals and ought to do so. Others argue that in private practice there is a large per cent of loss on bad debts, which is undoubtedly true, but in corporation work there are no bad debts, and, therefore, corporations and partnerships should have a reasonable discount from local rates. Moreover, they supply a much larger volume of business than any individual. Recognizing merit in this argument I said to this agent that I would make a 10 per cent discount from local rates if all the work was referred to me. His response was, "that means nothing to me." I lost that work, but got a bit of satisfaction out of the transaction besides the consciousness of being right. I lived to see the agent of that accident company and the superintendent of that industrial plant both go broke and out of a job.

There is another field of lively activity by these accident companies in which I have had an extensive experience. I refer to the exploitation of the medical profession by these "getters of easy money" in writing personal insurance. I think I have observed practically all the phases of their machinations in this field and how they exploit, not only the medical profession, but the poor laboring classes who are unsuspecting and do not read their policies. They listen to the plausible blandishments of the accident company's hireling whose elastic conscience, in many cases, enhances his value to his employer. This class of citizenship feel the need of some sort of protection against adversity because their margin between comfort and privation is so narrow that protracted disability drags them into the jaws of the wolf. Often have I witnessed the bitter disappointment of these people when it dawned upon them, when the wolf was actually at the door, that the protection they had paid for, in accumulating installments for years, had vanished under a clause in their policies, which the agent did not point out to them. To do so would be an argument against his business. The sucker might escape. The agent knows some other representative of the company will step in if a claim is made under the policy and that he

will probably not have to face his dupe. At this juncture, I am reminded that the accident companies have the sagacity to select agents possessed of an agreeable presence that inspires confidence; a man with a "gift of gab" that is appealing and assuring; a man who knows something of the lives, habits and credulities of the people he solicits. He tells them what a great blessing to them and their families the insurance company offers them in misfortune. His argument is persuasive and convincing, his manner inspires confidence and assurance; but he does not point out the joker in the policy which he knows the purchaser will not read.

How different is the man who appears on the scene when the policyholder files a claim. This man is the adjuster. He is not that kind, friendly, obliging fellow who sold the policy. The adjuster treats him like he was a grafter seeking something for nothing. This is the fellow who points out the loop-hole in his policy that the company slips out through. Some of you may have met an adjuster for insurance and know what a cold-blooded proposition he is. The adjuster gives him a blank form for his doctor to fill out. This blank has much detailed information to be supplied. Many questions are not easy for the doctor to answer unless he has kept an accurate and long drawn out record of the case. He searches his memory, he searches his books and sacrifices much valuable time in getting proof for the insurance company. The company tells the policyholder that all this mass of evidence for the primary report, the current report and final report are for the purpose of aiding him, the policyholder, in the prompt collection of indemnity. The company tries to blind its dupe to the fact that these requirements, this evidence, were created by the company for its own protection and not for the benefit of the insured. The company's representatives tell the policyholder that he must pay the doctor for all this time and trouble in helping him. The patient doesn't see it that way. In fact, it seems to him that the evidence is against him rather than for him and he feels no obligation to pay for it and will not do so. What is the result? Simply that the doctor is sacrificed. He loses his time and labor and pains and the accident company has caused it and profits by it.

Moreover, this is not all the damage, nor even the worst, inflicted upon the doctor. It often

happens that the doctor cannot make the proof as the patient wants it. The facts will not justify him if he squares himself with his conscience. *No man can afford to prostitute himself to oblige his best friend or to avenge his worst enemy.*

This disappoints the patient, loses to him a part or the whole of his insurance which he thinks he has paid for. This leaves a sore spot and the doctor loses out as his family physician or surgeon. The end is not yet. This man tells his neighbors and friends that the doctor's evidence or his refusal to make the right kind of proof, helped the insurance company beat him out of his insurance. These neighbors and friends don't want that kind of a doctor in their families and the doctor is sacrificed again many times. We might employ a bit of slang and say that he is "muchly and multitudinously" sacrificed and all for these getters of easy money.

Now this is all wrong, absolutely wrong. If the medical profession does not protect itself from this imposition, pray who will protect it? Is there a remedy? Most assuredly there is. The accident companies create the necessity for the evidence they require. They must have this evidence for their own protection and their profits. By every reason of justice and fair play they should pay for it. They will gladly do so when the doctors wake up and refuse to serve as cat's paws.

THE CALORIC METHOD OF ARTIFICIAL FEEDING IN NORMAL BABIES.*

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WHITE HALL, ILL.

If there is a weak spot in the practice of medicine, a stumbling block to the physician, it is my belief that infant feeding is the one branch of practice where we make more blunders than in any other.

For one who is grounded in the principles of nutrition and metabolism the average baby is easily handled, but for one not knowing the nutritional needs of infants his efforts are worse than hopeless. Even to the pediatrician this is the most difficult problem to be confronted. This problem should be given careful consideration and a study made of its complexities from the

stage of the fertilized ovum up to the end of the first year, when the milk supply fails and semi-solid food becomes a consideration.

It is an undisputed fact that breast-milk is the ideal food for infants and where the mother is unable to feed her infant a wet nurse, if possible, should be tried.

We must necessarily choose an artificial food in many cases and in so doing one should be chosen which conforms in ingredients, as nearly as possible, with human milk. The essential unity then should consist of (1) protein or proteid, which builds the tissues; (2) fats and carbohydrates to supply the energy; (3) mineral salts, to facilitate bone formation, and (4) water, to hold the nutritional elements in solution. The form in which the composite elements are given is just as important as is the composition of the food. These elements exist in a variety of forms and many forms are equally nutritious, but all forms are not equally suited to our needs for we must avoid digestive derangements. We must consider the peculiarities of the digestive organs for in no two children have we the same degree of digestive capacity. After composition and form have been considered, we must then deal with the required quantity necessary to produce proper growth and development, still keeping in mind the fact that an overfed baby is being subjected to more harmful results than one that is underfed.

In order to feed infants scientifically we must, therefore, know for each age: (1) the amount of energy needed for maintenance and work; (2) the average amount of energy wasted in excretions; (3) the growth desired; from these figures we can easily determine the necessary amount of food by its caloric value.

The food elements required for all infants are the same, but the form in which they are given must be determined for each individual infant.

It is only with the artificially fed infant, in health, that I am going to deal as caloric feeding is out of the question with breast-fed babies.

Cow's milk meets most nearly the needs of the infant, as it is composed of fats, proteins, carbohydrates, mineral matter, and water; because it resembles very closely the human milk, and because it is easily obtained. Again we have our troubles with cow's milk because the proportion

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of ingredients is not alike in cows of different breeds nor in different cows of the same breed. The mixed milk from a number of cows is more to be desired than from one cow because of uniformity of composition; less liability to fluctuations, changes in composition and disease-carrying possibilities.

In adapting cow's milk for infant feeding we must realize at the outset that, no matter how we alter it, cow's milk is not a perfect substitute for woman's milk. It should not be lost sight of that there are inherent differences which will never be altogether removed.

It can be stated, however, that generally the results of artificial feeding have been very good, provided the artificial feeding was conducted carefully by competent persons. Faulty methods are more often responsible for bad results than is the artificial feeding itself.

As regards infant feeding, Chapin says: "In reality the whole process amounts to the training of the infant's digestive organs, and it is important to commence in the early months with small quantities of the protein of cow's milk, as this causes the greatest amount of trouble, moderate quantities of fat, and a liberal supply of carbohydrates, as these cause little digestive disturbance when not given in too large amounts." It is necessary that a sufficient amount be absorbed of those substances that are needed for the sustenance and growth of the body and, moreover, the requirements of energy must be met.

I need not mention the trials and tribulations which are encountered in the use of the top milk or percentage methods as you have all had plenty of experience in their usage, and if any of you still remain apostles of this faith, it is simply because of lack of knowledge of something better. The complexity of these methods, not only for the mother who must prepare the milk, but also for the physician who must work out the formulæ for infants who differ in digestive capacity, alone renders their use impracticable. If the constituent elements of all milk remained constant in quantity, then we might work out our formulæ in definite proportions, but when you deal one day with a 2.5 per cent. and the next with a 5 per cent. milk you can readily see just how accurate will be your calculations, and again with these methods we have no way of calculating the quan-

tity an infant should receive. The percentage method of feeding infants is based on mixed ingredients in such combination that when combined they should resemble certain chemical formulæ of breast-milk at different ages. Theoretically, the percentage method is correct; practically infants cannot be fed according to definite percentages because of daily variations.

In feeding infants we have in all four classes with which to deal: (1) well infants which cannot obtain breast-milk, and the control of which the physician has from the beginning; (2) infants that are well except that they are suffering from bad methods of feeding—this being the common class; (3) infants of feeble constitution, whose digestion is easily deranged, and (4) infants that are acutely ill. With the first three classes we deal in using the caloric method.

During the first weeks the dilution should be such that the amount of proteid reaches approximately that of human milk. This is accomplished by adding two parts diluent to one part milk, higher dilutions being sometimes recommended. It is not rational to employ higher dilutions for not only are the proteids reduced, but other substances are diminished which the infant needs. In particular the caloric value of the food decreases to such an extent that the necessity for an increase of the total volume can hardly be avoided in spite of the addition of suitable constituents. The stomach and intestines are thus directly burdened and the total metabolism is overcharged, increasing the work of the heart, vessels and kidneys and increasing the production of sweat with its consequences. As to whether infants recovering from disorders of nutrition should not receive higher dilutions for a short time is another question.

The time of transition to more concentrated milk mixtures is best determined in a given case by the state of the infant's health and particularly by its digestive powers. Sometimes it will be necessary to give the stated dilutions for a longer period of time or return to higher dilutions. The transition should be very gradual. If under normal conditions, the energy quotient deviates for a long time disturbances are to be expected.

In the caloric method we must know the infant's age; the weight at birth and the present

weight; we must determine whether he is a fat, medium or thin baby; we must know the number and condition of the stools; whether or not he vomits or regurgitates his food and if so, when, how long after his bottle, how many times between bottles, how much at a time, whether or not it is projectile, character and odor; how many feedings he receives in twenty-four hours; how many ounces at each feeding; whether he takes all or only a part of his food; how many hours per twenty-four he sleeps; whether he is fretful or contented when awake; whether he is hungry or satisfied with the amount of food taken; whether he has been gaining or losing weight; whether the feeding has been regular or irregular; what food he has been taking and the method of preparation. With this data you are prepared to locate your trouble; to remedy the faults; to calculate the number of calories he has been receiving; to calculate the numbers of calories he should have; and to calculate the number of calories that he is going to get. It is very unwise to start feeding an infant the full number of calories he should have, for in the great majority of cases you will immediately get a food intolerance and this is what usually happens with the percentage method because the physician is not only in the dark as to the amount of food the infant should have, but he is ignorant as to the amount the infant has been receiving. Supposing we should have a patient, an infant with some intestinal derangement, and suppose we knew that this baby had been getting the wrong percentage of food, also suppose that we could not figure the amount of calories the baby had been getting. Now, Doctor, here is our patient waiting to be fed and we know this baby is sick because of a food intolerance caused by a food too high in protein and possibly sugar also, but we cannot figure the calories he has been getting. We must change the food and we will change the food, but how? Will we change it scientifically and by a method that we know is not likely to fail us or will we choose one of the top milk formulæ, guess at it and trust to providence?

The caloric method originated with the European physicians and found its way across the Atlantic, now being used in some of the best institutions in this country, the only difference being that the European men estimate calories per

kilogram, while we Americans estimate calories per pound. With the caloric method we deal with whole milk instead of percentage milk, sugar and water. Infants are divided into three classes for the purposes of arriving at the number of calories needed. It has been found by analysis as well as by experience that emaciated babies need from 60 to 65 calories per pound weight in twenty-four hours; normal or moderately fat babies should have, up to five months of age, from 50 to 55 calories; and fat babies should have from 40 to 45 calories.

The age of the infant must be known: the amount the baby weighs and the amount the baby should weigh at a given age. The rule for the weight is as follows: Babies from 1 to 3 months, weight equals (age plus 8); 3 to 7 months, weight equals (age plus 10); 7 to 12 months, weight equals (age plus 8).

Infants under ten pounds are allowed one ounce of sugar, and over ten pounds one and one-half ounces in twenty-four hours. There are three sugars commonly employed in infant feeding: (1) malt sugar or dextri-maltose, (2) cane sugar, and (3) milk sugar. Malt sugar is the most easily digested and assimilated, cane sugar next and sugar of milk the least so.

Babies up to five months of age should have seven feedings in twenty-four hours, feeding at 6 a. m., 9 a. m., 12 m., 3 p. m., 6 p. m., 9 p. m., and at 2 a. m. After five months the feeding at 2 a. m. should be dropped, leaving only six feedings in the twenty-four hours. The amount is determined by the baby's age, one to two ounces more being given at each feeding than the age in months, and never less than three nor more than eight ounces at each feeding. The average whole milk equals approximately twenty calories per ounce; sugar 120 calories and wheat flour 100 calories. Where a milk intolerance to the required caloric amount exists, infants are usually started on one-third milk and two-thirds water and this gradually increased to whole milk. In hot weather and when gastro-intestinal disorders are present the milk is poured into boiling water, stirred and left over the fire for three minutes. The objections to boiling the milk are: anemia, scurvy, rickets and constipation, but with careful watching and careful handling these objections can be overcome.

To illustrate: Supposing we have a patient 7 months of age, weighing 15 pounds. This baby would be classed as a normal weight baby and, therefore, should receive 50 calories per pound weight in twenty-four hours. We must first calculate how many calories this baby should receive in twenty-four hours. Taking 15, the weight times 50, the calories per pound, equals 750 or the number of calories per 24 hours. The baby being over 5 months old should receive 6 feedings in 24 hours and feeding 1 ounce per feeding more than the baby's age, he would receive 8 ounces per feeding, or (6×8) equals 48, the total number of ounces in the twenty-four hours. Supposing we give him $1\frac{1}{2}$ ounces of sugar in 24 hours (because his weight is over 10 pounds), and 1 ounce equals 120 calories, then $1\frac{1}{2}$ ounces would equal 180 calories. Subtracting the 180 calories from the 750 or total he should receive, we have left 570 calories to be supplied in milk. As milk equals 20 calories per ounce, then 570 divided by 20 equals 28.5 or the number of ounces of milk to be supplied for the 24-hour feeding. If we give a 48-ounce mixture in 24 hours and 28.5 ounces of that is milk, therefore the remaining 19.5 ounces must be supplied in diluent or water. We then have as a result this formula: Milk, 28.5 ounces; water, 19.5 ounces; and sugar, $1\frac{1}{2}$ ounces or 6 level tablespoonful. (Malt sugar) — 6 level tablespoons per $1\frac{1}{2}$ ounces.

Age, 7 months—weight, 15 pounds.

Number of feedings, 6—ounces per feeding, 8.

$6 \times 8 = 48$, # oz. in 24 hours.

Sugar, $1\frac{1}{2}$ oz. = 180 cal.

$15 \times 50 = 750$ total cal. in 24 hours.

sugar = 180 cal.

570 to be supplied in milk.

$570 \div 20 = 28.5$ oz. milk.

$48 - 28.5 = 19.5$ oz. water.

1.5 oz. sugar.

If we had been feeding this baby since birth this is the mixture he would be receiving at the present time, but as this is his first visit to us we would not dare start him on this combination for fear of an intestinal derangement. The question then naturally arises, what would we do? We would give him six feedings and his eight ounces, making a total of 48 ounces in 24 hours,

but we would start him on whole milk, $\frac{1}{3}$ part, or 16 ounces; water, $\frac{2}{3}$ or 32 ounces, and sugar 1 ounce. On this mixture then he would be getting—

Milk, 16 oz. $\times 20 = 320$ calories from milk.

Water, 32 oz.

Sugar, 1 oz. = 120 calories.

Total 440 calories.

We would start him on 440 calories in 24 hours instead of on 750, his required amount, but we gradually increase our calories every three or four days until a tolerance for stronger food becomes established. This is done by first increasing our sugar content up to the required amount or $1\frac{1}{2}$ ounces, then our milk is increased and our water diminished, up to nine months of age, when he should be receiving 850 calories or 180 calories in sugar and 670 calories in milk. If he is receiving 850 calories at 9 months, what will his formula be?

Sugar, $1\frac{1}{2}$ oz. = 180 calories.

Total cal. or 850 — 180 = 670 cal. in milk.

$670 \div 20$ (1 oz. milk) = 33.5 or ounces of milk in 24 hours.

$48 - 33.5 = 14.5$ or ounces of water in 24 hrs.

We have then this formula:

Milk.....33.5 oz.

Water.....14.5 oz.

Sugar.....1.5 oz. or 6 level tbs.

This is the caloric method of infant feeding in a nutshell and, as you see, has been presented in a rather condensed form. I have not elaborated on this method for the simple reason that it would take a good sized book to explain each step in detail, but it has been the purpose of this paper to make, if possible, the simplicity of this method clear and to give you, who are not acquainted with the caloric method of infant feeding, just enough to get your interest, and if this has been accomplished we will have saved the life of many babies as, in the opinion of the writer, this method, if used rightly, is a trusty weapon of defense in feeding cases. It is not only easy for the physician to grasp but the mother soon learns to understand it and if she understands what she is doing, she can better do it.

I have no hesitancy in saying that in the years

to come, it is my opinion, this method will be the one universally used and that the old top milk and percentage methods will become obsolete. It is just as easy to feed babies by correct and scientific as by haphazard and guesswork methods, and it is much more satisfactory, not only concerning the welfare of the infant, but to the reputation of the physician.

DISCUSSION

Abstract

DR. S. L. GABBY, Elgin, finds that many babies are very much under-fed in the early months of their lives, rather than over-fed.

While agreeing with the author in using the caloric method, he believes many of the disturbances which he lays to the fact that the babies are over-fed with protein or sugar are very probably due to bad milk, and he does not fear the sterilization of milk. The dangers of scorbutus and other derangements due to the boiling can readily be overcome by adding fruit juices.

He does not hesitate to feed babies the very first day of their lives and he finds that colics and other derangements which we lay to overfeeding are due to underfeeding, and that these babies frequently cry from hunger. A baby can stop when it gets enough to eat, but it can't get more when it isn't given to it.

He uses scales to find out how much the babies are getting from the breast, and does not hesitate to give them artificial food.

DR. HENRY W. CHENEY, Chicago: To those who are not particularly interested in feeding babies, Dr. Frech's careful calculations may seem very complicated and difficult to remember. That, however, simply shows that the baby should be fed by a doctor who is interested in the baby and who knows all the details that are so necessary in pediatric practice. Detail in feeding babies and in the care of children is the main thing. As the doctor suggested, particularly, we must inquire into the hours of feeding the child, the comfort and stools and vomiting, and all that. Most of the ordinary practitioners don't have time to bother with such things, and so his suggestions are very valuable.

He emphasized the value of boiling milk in difficult feeding cases. We used to be afraid of feeding babies boiled milk for any length of time, but we know that boiling a milk mixture for two or three minutes will oftentimes overcome many cases of difficult feeding. Oftentimes carbohydrate is more responsible for trouble than the protein.

DR. C. W. EAST, Springfield, thought the great value of the assayer's paper is the fact that he has a method and that he is interested in detail, and that he doesn't merely tell the parent to either feed cow's

milk or one of the proprietary foods or Eagle Brand or even mother's milk.

Almost all we hear on baby feeding seems to go on the assumption that the child is some kind of a container into which if you get the right mixture everything will be all right. Now, it isn't true, because back of it is what Dr. Butler so well instanced, and at the present the best method of baby feeding is by the intelligent, conscientious and interested doctor.

Only last week two in a family of children who had, as far as we could judge from carefully taken history, had every advantage of maternal feeding from their healthy country mother and yet now at the ages of five and seven years if we would have stood them upon the table the bow-legs of one and the knock-knees of the other would have spelt "o-x, ox."

Dr. Frech (closing discussion): There is just one point brought up in the first discussion that I would like to say a word about. I am going to make a bold statement. This gentleman stated that he found the majority of troubles with infants came from under-feeding. Gentlemen, I have never in my life seen an infant deranged from under-feeding.

Pathologically, if you are under-feeding a baby, the baby will be cross and fretful perhaps from hunger. Hunger doesn't hurt a baby. It doesn't hurt you to go hungry if you have sufficient calories to maintain your body needs or equilibrium. But with overfeeding, you get all your intestinal derangements. I have watched these cases very closely at the babies' hospital in New York City and also at the Post Graduate, and I find that after all, if you are going to take up the subject of intestinal derangement, which my paper didn't intend to cover, but since it was mentioned I thought I would say a word about it, the best thing is to take the classification of Finklestein and stick to it.

If your feeding is not agreeing with your baby, you are going to get a disturbance of balance. If you are in a position to recognize that you have a baby with disturbed balance, it is easily corrected then and there. If this disturbance of balance is not corrected immediately, your next step will be of dyspepsia which includes colic and other so-called gaseous fermentation. Dyspepsia is easily corrected, but if not corrected, the next thing you will have an intoxication. Intoxication may be corrected but not easily. Intoxication is a condition that is hard to handle and if your intoxication is not corrected in due time, your baby goes on to the state of decomposition, and when you get a baby in the state of decomposition, the fight is just about over; there is very little that can be done. There are very few that get well when they reach that stage. If more men would follow that one classification, it appears to me these cases would be very easily understood. A man doesn't have to diagnose a bowel trouble as an enterocolitis or as a colitis. The general condition goes more into it.

Take your four points of classification from Finklestein's "Disturbance of Balance and Decomposition." It will serve the whole thing.

SOME PROBLEMS IN INCREASED INTRA-OCULAR TENSION*

THOMAS FAITH, M. D.

CHICAGO

It is not the purpose of this paper to advance any new theories as to the etiology of glaucoma, nor to precipitate a discussion of the subject in general, but to recite a few cases that have come under my observation and to discuss with you the problems which they have presented and if possible by the discussion of these problems to arrive at some satisfactory explanations for the unusual features which they have presented.

I submit the following cases:

Case 1. C. R., aged 54. First seen May 3, 1902. Complains of gradual loss of vision in right eye for a number of weeks and of pain for a few days. Health has always been good and he has been a very active carpenter contractor for many years. Has no history of injury.

R. E. V. = fingers at 8 feet. Anterior scleral vessels distended; anterior chamber shallow; pupil slightly dilated; T + 2; media clear, disk cupped, typical of glaucoma.

L. E. V. = 20/40; eye in every way normal. Media and disk normal with + 50 = + 75 \times 180; V = 20/15.

Ordered Eserine sulph. gr. 1 to 3i in right eye 6 times per day. Pain disappeared at once; pupil contracted and tension somewhat reduced but still + after ten days' treatment R. V. = 20/160. After two weeks of treatment with eserine—iridectomy was advised as tension was still elevated. Patient refused operation; eserine was continued and he was seen regularly every three or four days up to first week in July at which time tension was still + and vision 20/180. Pupil remained contracted and field was contracted about 20° above, 20° temporal, 25° below and 30° nasal. The media remained perfectly clear.

About this time patient went on an extended ocean voyage, remaining away from home several months, traveling in various European and Asiatic countries, and I did not see him again until the third week in November, being absent four and one-half months. When I examined the eye again I found right vision nil. No light perception, pupil dilated, lens completely opaque; anterior chamber about normal depth and strange to say tension normal or about the same as in the left eye. No pain or discomfort whatever.

He stated that he had not used eserine since about August 20th, as at that time his supply became exhausted, while he was traveling in the Orient, and as he was not suffering he made no effort to have his drops replenished, but he had noticed the gradual decrease of vision which he thought was no more rapid after the drops were discontinued than while they

were used. I saw this gentleman occasionally for about fifteen years, refracting the left eye a number of times and always found the blind eye free from pain or tension. A strong divergence developed as is often the case with a blind eye. When last seen in 1917, T. of R. E. was 20.

L. E. T. = 22; L. E. V. = 20/15; with correction and field normal. The right eye never suffered any further degenerative changes.

I am at a loss to explain the happenings in this case except on the supposition that lens swelling existed for a number of months before any change in transparency could be observed; unless the change was peripheral, and since the case presented all of the earmarks of a chronic simple glaucoma, there was no reason for dilating the pupil. The disappearance of hypertension after opacification and shrinking of the lens certainly helps to bear out the theory of lens swelling as a cause of the glaucoma.

That a lens may remain clear and swollen for some months has been shown a number of times in cases in which foreign bodies have been lodged in the lens; and these lenses always eventually become opaque.

Then, too, we know that we may have fair central vision with a lens swollen several diopters, but it is surely unusual to have a lens so swollen that it produces the above symptoms and yet remains to all appearances clear. Of course there was a cause for the lens swelling, but the exact cause I can only conjecture.

Case 2. N. S., aged 32; painter. Came in September, 1908, complaining of asthenopic symptoms, lachrymation, slight frontal headache, and sensitiveness to light, particularly in the morning.

R. V. = 20/50; L. V. = 20/40. Right pupil very slightly dilated; left normal in size and in reaction; anterior chambers both shallow, right shallower than left. Right eye slightly more prominent than the left and anterior scleral vessels more in evidence than in left eye. Media clear; both eyes' nerve heads normal; some excavation, but of typical physiological type.

There was, however, a distinct ring of atrophy in the choroid at about one-half a disk diameter from the disk margin and completely surrounding the disk in both eyes.

R. T. = 46; L. T. = 38 with Schiotz tonometer. Fields in both eyes showed a concentric narrowing, of about ten degrees with a slight cutting in of the nasal and superior nasal field of the right eye. Pilocarpine gr. 1 to 3e 5 was ordered to be used four times during the waking hours and once during the night. After four days of this treatment

R. V. = 20/25; L. V. = 20/15. R. T. = 30; L. T. = 25.

*Read before the Ear, Eye, Nose and Throat Section of Illinois State Medical Society at Tenth Annual Meeting at Rockford, May 19, 1920.

Patient had a thorough general examination by Dr. Arthur Elliott with negative report. He was under observation for three and a half years constantly using myotic solutions. When last seen in 1912 R. V. was 20/25, T. 24; L. V. 20/15, T. 20. At this time he was using pilocarpine nitrate gr. iii to 5e 5 and was perfectly comfortable. The ring of choroidal atrophy had become more marked in the right eye, but remained about the same in the left eye as when first seen. There had been no apparent change in the nerve head in either eye and the fields when last taken in December, 1911, showed practically the same outline as when first observed.

The lack of a glaucomatous excavation in this case one can explain on the supposition that the patient probably had a rather prominent papilla previous to the onset of his glaucoma; but why the ring of choroidal atrophy should develop so early in the course of the disease since it is usually a very late manifestation of chronic glaucoma is a fact for which it is difficult to find an explanation.

Case 3. Miss J. J., aged 29, Norwegian housemaid. Came in September, 1912, complaining of loss of vision in right eye. She stated that since the early part of the previous winter she had suffered from attacks of slight inflammation and pain in the right eye. These attacks would usually last for a couple of weeks and she noticed that after each attack her vision became poorer. She has had no attacks during the past three months but vision in right eye is rapidly diminishing. She has never consulted an oculist previous to this time but has been given a number of pairs of glasses by a local optician.

R. V. light perception only; pupil dilated oval vertically; anterior chamber shallow; pronounced glaucoma cup with arterial pulsation in retinal vessels. T. = 62, Schiotz tonometer. Eye not congested.

L. E. V. = 20/50; anterior chamber shallow; pupil dilated oval vertically; T. = 36; distinct glaucoma cup. Right field could not be taken but left field showed contraction of 20°, temporal 15°, nasal, 18° superior and 10° inferior.

Eserine gr. 1 to 5i ordered for right eye and pilocarpin nitrate gr. II to 5i for left eye. The drops to be used in each eye 6 times per day.

After five days of this treatment R. E. T. = 56; L. E. T. = 26. No improvement in vision of right eye, but vision of left eye improved to 20/30 +

Patient was sent to hospital and subconjunctival injections of citrate of soda were used in right eye for one week, the myotic being continued in both eyes. There was no improvement in tension or vision in right eye at the end of this time and a sclerocorneal trephining was done. Tension was reduced to 15 or 18 and remained so for about six weeks when a complete retinal detachment occurred. The tension increased to 70 and the eye which began to show

scleral ectasia was removed. During this time tension in left eye was kept between 18 and 25 by the use of a pilocarpine. Patient was seen every one or two or three weeks until August 5, 1915, at which time L. V. = 20/30 with correction T. = 23 and no perceptible change in fields. The case was not seen from this date until November 28, at which time V. = 20/40, T. = 48, and field narrower than in August.

From November 28, 1915, to March, 1916, the strength of the pilocarpine was constantly increased up to 2 per cent; then eserine was substituted beginning with 1 gr. to 5i and gradually increased, and while the central vision came back to 20/30 tension could never be reduced below about 26, and frequently went to 34 or 36, the fields slowly narrowing. On March 3 iridotaxis was performed with immediate reduction of tension and apparent arrest of field changes, the tension varying between 12 and 18 with the Gradle instrument for a period lasting from March, 1916, to June, 1919, when a drop in central acuity to 20/40 was noted, accompanied by a further pronounced decrease in the extent of the field. Tension, however, remained around 15 or 18.

Eserine was tried but with no benefit. Fields and central vision have continued to deteriorate. When last observed on March 17, 1920. Central vision 20/60 and fields only about 10° or 15° across. Patient sees red and green with much difficulty. Three blood Wassermanns have been made on this case since June, 1919, and all have been negative. This case certainly shows the futility of pinning our faith to myotics when so much is at stake.

Case 4. Mrs. M. S., aged 43. Came February 27, 1920. For past week has had blurring of left eye and occasional headache over left eye. Had similar trouble sixteen or seventeen years ago. R. V. = 20/25; L. V. = 20/100. Eye congested. Anterior scleral vessels much distended and pupil slightly dilated but reacts to light readily and anterior chamber was deep. Tension to fingers +; media perfectly clear and fundus normal; fields right normal, left contracted 20° in nasal field. With tonometer T. = 75. Such high tension with good pupillary reaction was so unusual to me that I secured another tonometer thinking my instrument might be at fault, and on re-testing found T. = 75 same as with my own Gradle tonometer. Arterial pulsation was not present, but could be produced by pressure with the finger against the globe. There was a small posterior synechia below which patient states was present after the old attack. On account of the deep anterior chamber, I determined on carefully using a mydriatic. I accordingly applied five instillations of 2 per cent homatropine sol. with two instillations of 4 per cent cocaine. At the end of an hour and a half the pupil was dilated widely and the tension was reduced 15 points, being now 60 instead of 75. A careful examination of the cornea lense and media showed no exudates whatever. Scopolamin hydrobrom gr. I to 5i every

two hours was ordered. A leech was applied and a calomel purge was given. The next day tension was 50; less pain and eye feeling much better. L. V. = 20/40. March 1, T. was 20 to 24 and V. = 20/30 and remained so for one week when tension decreased still further, feeling distinctly minus to fingers and recording 10 with tonometer. About this time a few deposits appeared on the lense but none could be seen on the posterior surface of the cornea. This patient had a + + + Wassermann, and a number of teeth with apical infection, but had practically recovered from her eye condition before any of the teeth were extracted. She had been given about eight or ten rubs of gr. each of unguentum hydrarg up to this time. The eye has remained well and patient is under the care of her physician for her lues. She has had part of her bad teeth removed and when I last saw her V. = 20/25, field normal and T. 18-20.

These four cases have been selected from among a considerable number of private cases of glaucoma of which I have rather complete records, on account of the unusual features which they have presented, and in their study one is confronted with a number of problems the solution of which would add much to our understanding of what we are pleased to call glaucoma.

In Case 1 my diagnosis when the case first came under observation was primary chronic non-inflammatory glaucoma, but the subsequent history entirely refutes this diagnosis; as cases of this class do not recover normal tension either with or without operation in most instances and marked degenerative changes in the globe practically always occur in the course of time. On the other hand, could a lens swell sufficiently to produce T of + 2, a dilated pupil, a glaucoma cup and a shallow anterior chamber without showing some evidence of opacity, and if it were not lens swelling which caused the symptoms, how can we account for the return of tension to normal, and the deepening of the anterior chamber which accompanied complete opacification of this lens?

In Case 2 which followed the course of a rather mild chronic non-inflammatory glaucoma, how can we explain the early appearance of the ring of choroidal atrophy which was seen when the patient first appeared for treatment and which was unaccompanied by characteristic changes in the disks, yet these rings of choroidal atrophy, which became more pronounced with time, were the only positive degenerative changes which could be seen.

In Case 3, which in most respects is a typical case of chronic primary glaucoma, we are confronted with the problem of optic nerve and retinal degeneration continuing after the hypertension has been permanently relieved, which I would account for on the principle that once a degenerative process (primarily due to pressure) has been set up in these nervous structures and has become well established the changes continue even though the pressure has been removed, and this I believe is one of the strong arguments for early operation in primary glaucoma, the tension to be relieved before the degenerative processes have become well established.

In the fourth case the problem is to account for the freely mobile pupil with tension of 75, and there is no doubt that it was true intraocular tension, since it was reduced by treatment, and the question naturally arises in this case, does a deep anterior chamber always mean secondary glaucoma, or increased intraocular tension from disease somewhere in the uveal tract.

And I would raise the question, Is it not usually a safe procedure to use a mydriatic guardedly in all cases of increased intraocular tension which are accompanied by acute congestive or inflammatory symptoms if the anterior chamber is deep?

DISCUSSION

ABSTRACT

DR. H. H. BROWN (Chicago): The confusion of our knowledge of the elementary condition of the eye in glaucomatous conditions makes us rather dubious as to our treatment of these conditions.

It may escape our attention for a short time, but a swollen lens can not exist without indexing a diseased condition of the interior of the eyeball. It is indicative positively of the retinal choroidal change related in one of these cases.

The doctor has failed to make any statement or reference to general physical conditions, which should never be overlooked in the discussion of glaucoma, because they are as closely allied to physical changes as any disease of the eye which we are called upon to handle.

However, there are obscure physical conditions within the eye possible of inducing a tension, illustrated by the crescent which is referred to in one of these cases as later productive of physical disturbance in the zonular, and thus lenticular swelling and tension. Now, this lenticular swelling and zonular perversion is where the question of operation versus myotic naturally comes in for discussion.

He is of the opinion that the longer we pursue the

myotics, the less confidence we have in their use and that we come to a period sooner or later where the only definite means we have in hand is operative procedure of one type or another.

Time and again, he has instilled a mydriatic into the eye when he knew the tension was up, to get a reduction.

Is that due to temporary plugging of the zonula which is relieved, and is it safe to attempt that as a routine? No doubt many of you slip a little atropin into the eye when you don't want the other fellow to know it, because it is inexplicable that some of these cases are immediately relieved by the instillation of a dilating agent.

He assumes that it is pulling back the iris and giving the swollen lens an opportunity for accommodation.

DR. CLARK W. HAWLEY (Chicago): is convinced that in most of our cases glaucoma is a symptom rather than a disease in itself.

I haven't the time to go on and say what I would like, but as an illustration of that, I would say this: About four years ago, I believe, I was the first one in this country to develop the subject of a physical condition of the body which indicated itself in a glaucomatous attack. It had been hinted by our lamented friend in Philadelphia, who had just died, and I reported before the Pacific Coast Ophthalmological Society, six cases which show distinctly that many of our glaucomatous cases come from some physical defect of the body. All these cases today, except one, are practically well, after four years.

I am speaking of this now to show you where the six cases stand. The first one can never have glaucoma again because she is now dead. But up until she died, there was no loss of vision. One peculiarity of this case was that she was a one-eyed individual.

The next case I have followed for four years, and she has no increased tension. Her vision is 20/30 and had increased from 20/100 to 20/30. That individual is one-eyed.

The next case has disappeared from my observation, but I understand that she also is well.

The fifth case was a very serious one, and she lost both eyes, in spite of all that I could do for her.

The sixth case is one that Dr. Suker has seen—simply chronic glaucoma. That patient today is holding her own, though she had a second attack a year ago, following a very severe influenza case. That is a one-eyed case.

The question arises then with Dr. Suker's remark that they are sympathetic cases.

In this last case I removed the left eye twenty-two years ago, and I don't know where the trouble comes from, unless from the stomach.

All these cases have been treated almost entirely at first by caring for the infection of the lower bowel. The first case had nothing but that for a week, and she promptly recovered her vision and retained it until her death.

So, I believe we are all working perhaps at the wrong end of our problem when we work at the glaucomatous condition in the eye itself, and I think we would find, if we studied it more, that our glaucomatous trouble comes from some physical ill.

DR. C. B. WELTON (Peoria): One of the problems is whether to go in on these cases with operative measures or treat them with myotics.

In one case of chronic inflammatory glaucoma he has been using atropin, because of the progressive contraction of the fields; in another he has continued the myotics. In both these individuals the vision in one eye was lost entirely. In the other, there is this phase of the problem, whether to operate or continue treating as Dr. Faith suggested.

He would like to know the long after-history of these operated cases, and how that is as compared to other cases.

DR. HAYDEN (Chicago) considered the statement of the author's fourth case and Dr. Suker's remarks about glaucoma being not an eye disease but an eye manifestation of a general condition, to be extremely important.

Focal infection, that Dr. Faith mentioned in his last case, should always be looked into. And the question of careful elimination of syphilis, not only by blood Wassermann, but also by the spinal fluid Wassermann, is extremely important because not a few cases will show a strongly positive spinal fluid reaction when the blood is entirely negative.

The use of mydriatics in glaucoma must be attempted with great care, and in no instance should any sort of a mydriatic but homatropin be used in the beginning. If we assume that the glaucomatous condition is due to an iridocyclitis, the use of the mydriatic will be attended with beneficial results.

Brilliant results have also been reported of cases that had been treated with the thermophore five or six years ago with no recurrence of pain and with their vision still as it was at the beginning of the treatment. The treatment, as you know, consists in the use of dry heat from the thermophore applied to the eye at about one hundred forty degrees for about five minutes at a time.

DR. OLIVER TYDINGS (Chicago) approved the use of homatropin as the mydriatics of choice cases of doubt. There are cases where it is impossible to make a diagnosis without it.

Dr. Faith spoke of a deep anterior chamber with a ciliary congestion, first of the swollen lens. He believes the tension will keep practically normal until you have inflammatory symptoms started, followed by an increase in tension when you get your glaucomatous tension secondary.

There is some physical condition in these cases that we do not know the first thing about. The sooner we acknowledge it, the better for us. There is nothing he approaches from a diagnostic standpoint with greater care than glaucoma.

SOME PROBLEMS ENCOUNTERED IN ATTEMPTING TO APPLY INSURANCE METHODS TO THE SICKNESS HAZARD*

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SCHENECTADY, N. Y.

Some reasons why sickness insurance of the ordinary short duration illness type has remained a weak sister in the insurance family.

Arguments showing the fundamental weakness of the type of so-called health insurance proposed by the advocates of compulsory health insurance.

The first amendment I would offer to any health insurance scheme either voluntary or compulsory would be to eliminate all provisions for fund paid medical service.

U. S. statistics show clearly that so far as the ordinary run of illnesses are concerned there is no more reason for the doctors being paid through an insurance fund than there is for paying the grocery bill by means of grocery insurance.

In the United States less than 3.5 per cent. of sickness costs are covered by insurance. This is the record as it stands after more than fifty years of normal opportunity for development. The advocates of Compulsory Health Insurance would have us believe that the more than 96.5 per cent. deficiency should be made good by the mandate of the law. At first glance some of their arguments seem at least partially plausible. However, when after more than fifty years of free opportunity for development an insurance plan shows a record of less than 3.5 per cent. accomplishment and more than 96.5 per cent. failure of accomplishment then there must be something wrong with the plan. I believe that it will be well worth the time at our disposal to study some of the reasons for this failure.

The chief reasons for the failure are, I believe, not difficult to ascertain. A study of those forms of insurance which have become almost universal in their application, such, for instance, as fire, life, marine and auto liability insurance, shows us that all of these forms of insurance comply with certain fundamental requirements. *First*, the events insured against are of relatively infrequent occurrence, and *second*, the events when they do occur are serious and as a rule beyond

the ability of the insured to meet their consequences successfully without the aid of insurance. A community of three or four hundred houses loses on an average only one or two each year by fire. Between the ages of twenty and forty the chances of death per individual per year are only about one in a hundred. Compared with the number of ships that sail the seas shipwrecks are very rare. Considering the number of automobiles in operation accidents with serious personal injury plus liability are relatively infrequent. On the other hand the losses caused by these events when they do occur may be very great, and far beyond the normal ability of the insured to meet without the aid of the insurance.

The mere fact that certain events when they do occur are liable to cause more or less hardship or that the expenses incurred by them are more or less irregularly distributed is not in itself proof that the insurance method can be successfully applied. Everyone knows and recognizes the advantages of fire insurance, and yet I have never heard anyone advocate that the average property owner should attempt to cover by the insurance method the expenses incident to the ordinary wear and tear on his property. Probably every man in this audience who owns his home carries fire insurance, and yet I do not suppose that a single one of you has ever even thought of carrying insurance against the occasional necessity of having to paint your house. There are some very definite reasons why house-repairs insurance has never been developed. In the first place the necessity for such repairs is of frequent occurrence and insurance covering them would require an enormous amount of detail in its management, necessitating correspondingly high overhead costs. In the second place the expenses when they do occur are not beyond the ability of the house owner to meet by other means less wasteful and expensive than the insurance method.

The moment we begin to study the problems of sickness insurance we find that when we attempt to cover by the insurance method the ordinary run of short duration illnesses we are confronted with an insurance proposition of the house-repairs or house-painting type. Minor repairs are of almost yearly occurrence, and so are minor illnesses. The average house needs repainting about once in five years, and the average

*Read before the Medical Society of the County of Washington at Hudson Falls, New York, October 5, 1920.

individual suffers a short-duration, incapacitating illness about once in five years. True it is that the incidence of sickness is not evenly distributed, but, as I will show you later, the uneven distribution of sickness has mostly to do with the hard-hitting, long-duration illnesses which I believe constitute the insurable portion of the sickness problem.

To illustrate still further the vast difference between fire insurance and sickness insurance of the short-duration illness type let us compare the relative costs of the two. In fire insurance the ratio between cost and protection is for the average risk about \$1 premium per annum for \$300 worth of protection. In the case of favorable risks the \$1 premium per annum will purchase as high as \$600 of protection. The ordinary short-duration illness type of sickness insurance is from *fifty to one hundred* or even more times as costly as fire insurance. One of the best of the short-duration type sickness insurance policies ever offered is that of the General Electric Mutual Benefit Association of the Schenectady Works. During the six years ending with 1919 the ratio between premium and protection in this association was \$1 premium per annum for an average protection of \$4.84. Even this insurance cost the holders more than sixty times as much as did their fire insurance. Most other sickness insurance policies which I have studied are even more expensive.

When one can insure a six thousand dollar house against loss by fire at a cost of twenty dollars per year, there is no question of the advisability of carrying the insurance. On the other hand, if it were to cost \$1,500 per year to insure a \$6,000 building then almost no one would carry fire insurance. This is, however, almost the exact ratio between cost and protection as it obtains in the short-duration illness type of sickness insurance.

The reasons for the low insurance value of the short-duration illness type of sickness insurance are not difficult to ascertain. The economic value of insurance decreases as the occurrence against which the insurance is carried becomes more frequent and the distribution more uniform. For illustration, suppose that each individual could count upon being sick once a year for an approximately uniform length of time. Then it would be the height of folly to attempt to carry yearly term sickness insurance because

from the very nature of things the returns from this insurance could only be the amount of the premium paid less the overhead costs of conducting the business. It is because the common run of short-duration illnesses are of relatively frequent occurrence and have a relatively uniform distribution that they do not lend themselves readily for solution by the insurance method. Out of a group of 1,000 individuals approximately 400 will suffer some form of illness during the year. About 200 members of this group will have one or more weeks of disability due to illness, but of these only about sixty will suffer more than four weeks' disability and only about twenty will suffer more than ten weeks' disability. In the case of the twenty suffering the more than ten weeks' illness and of the sixty suffering more than four weeks' illness there is no question of the desirability of sickness insurance but to attempt to include along with them the two or three hundred cases of minor non-disabling illnesses or even the one hundred and forty cases of short-duration disabling illnesses is bound to result in an attempt to accomplish something which does not conform with the first fundamental requirements of a successful insurance proposition.

The remarkable uniformity of the distribution of the short-duration illnesses is nowhere better shown than by the data obtained by the United States Bureau of Labor Statistics. A study by this department of the cost of living in 1,214 workingmen's families in several different localities showed that 99.3 per cent. of these families had sickness expenses during the year. Although 99.3 per cent. of the families had sickness expenses during the year the costs were so uniformly divided that while the average cost for medical care was \$44.64 per family per year, only 3.47 per cent. of the families had medical expenses amounting to more than \$150 during the year. These figures would lead us to believe that their expenses for medical and dental care were more uniformly distributed than were their house-painting bills. Certainly they were more uniform than were their expenses for motorcycles and Fords.

I believe that every member of the medical profession should keep clearly in mind the true meaning of this data furnished by the United States Bureau of Labor Statistics. These figures show with unmistakable clearness that as

far as the ordinary run of illnesses are concerned there is no more reason for the doctors' bills being paid through an insurance fund than there is for paying the grocery bills by means of grocery insurance. The longer time credits extended for the payment of medical services as compared with the grocery bills more than compensate for the slight irregularity in the family distribution of the medical bills.

There are very good economic reasons why neither the grocers nor the physicians should be handicapped by the losses due to the attempt to apply insurance where insurance methods are not properly applicable. Grocery insurance would mean that a large part of the funds spent for the family food supply would go not to pay the grocer and the producer of the foods but to support the overhead costs of conducting the necessarily very expensive grocery-insurance business. Likewise when doctors' bills are paid from insurance funds much of the money spent for medical expenses goes not for medical attendance but for the overhead costs of conducting this highly complicated form of insurance. In New York State it costs more than forty cents to distribute each dollar in benefits under the relatively simple provisions of the Workmen's Compensation Act. In the case of workmen's compensation this expense is justifiable because of the necessity of charging to industry the costs of the injuries caused by industry. No like reason exists for burdening ordinary illnesses with similar overhead costs.

In the foregoing paragraphs I have outlined very briefly some of the reasons why sickness insurance of the ordinary short-duration illness type has remained a weak sister in the insurance family. In the first place this form of insurance is too expensive. In the second place the short-duration illnesses are not, as a rule, calamities which can not be met equally well by some other more simple and less expensive and wasteful method than the insurance method. However, we must all recognize the fact that sickness is at times a calamity and that there are a certain proportion of illnesses which extend far beyond the reasonable ability of the inflicted individual, or family, to meet successfully without the aid of insurance.

The advocates of Compulsory Health Insurance tell us that out of 1,000 individuals about one-half of the total cost of all the sickness of the entire group falls upon about 21 individuals. This is

approximately the truth and constitutes a strong argument for a properly developed sickness insurance, but it is no argument at all for the type of pseudo-insurance proposed by the A. A. L. L. This is because after using the 21 unfortunate individuals for purposes of argument the Compulsory Health Insurance scheme calmly abandons these unfortunates a few weeks after they enter the hard-luck stage of their illness. While I am absolutely opposed to the house repairs type of sickness insurance, which is exemplified in its most extreme type in the so-called insurance scheme proposed by the American Association for Labor Legislation, I nevertheless believe that the insurance method could be applied so as to give protection against the losses caused by the longer duration illnesses.

Take for instance the case of tuberculosis, doomed to a sickness not of days but of months, what a wonderful social and economic help it would be if each case of tuberculosis were insured by an insurance plan paying two-thirds wages, beginning two or four weeks after the onset of the illness and extending not for three months or six months as proposed in the Compulsory Health Insurance scheme, but until recovery or death. This would be real insurance the economic and social value of which must be self-evident to every physician.

In order to test the possibilities of developing a type of sickness insurance covering the longer duration illnesses, I decided to make the attempt to obtain this type of insurance for myself. I was more successful than I had anticipated, and for purposes of illustration I will tell you what I have done in the matter of insuring myself against the possibility of loss by sickness. Take, for instance, the ordinary sickness and accident policy offered by any of the standard companies. These policies pay a stipulated weekly indemnity for fifty-two weeks of illness. There are also certain allowances for doctor's bills, surgical operations, etc. This was not at all the type of protection that I needed. In the first place all of us can finance the first few months of any sickness which we may have. We can collect the old bills due us, or sell a car, or borrow some money. In the second place this insurance stops at the end of a year, which is just about the time most of us would feel the pinch of a real long duration illness. In the third place this form of insurance is almost prohibitively expensive. A policy giving \$500 per month protection for

52 weeks' illness would have cost me approximately \$300.00 per year premium.

I figured that a sickness insurance policy giving the kind of protection that I really needed should protect me beginning six months after the onset of any illness and continuing not a few months or a year but until recovery or death. I applied for such a policy, and after some correspondence with the head office of one of the large companies received a special policy paying \$400 per month for any disability due to accident or illness, the payments beginning six months after the onset of the disability and continuing until recovery or death. The premium for this policy was only \$62 per year, or about one-fourth the cost of ordinary short-duration illness policy. Later this company got out a standard policy with the benefit payments beginning three months after the onset of the disability and extending until recovery or death. This policy is not cancellable, and the yearly premium at my age was \$79 per year for a policy paying \$500.00 per month for disability due to any cause. I believe that the premium for new applicants has been raised slightly during the last few months, but several companies are now issuing this type of insurance to selected risks at a rate of about \$18 per year premium for each \$100 per month protection against disability, the payments for disability beginning three months after the onset of the illness and extending until recovery or death.

It is not the purpose of this paper to advertise any form of sickness insurance policy. What I do want to do is to call your attention to what I believe to be some of the fundamental weaknesses of the type of so-called health insurance proposed by the advocates of Compulsory Health Insurance and to indicate what I believe should be the lines of progress if sickness insurance is some day to take its place as an important factor in solving the problem of the hardships produced by sickness.

The medical profession has been time and time again asked to suggest really constructive changes in the scheme as proposed. The first amendment which I would offer to any health insurance scheme, be it voluntary or compulsory, would be to eliminate all provisions for fund-paid medical services. The medical profession of this country knows that the employed wage-earner is abundantly able to pay the ordinary expenses for medical care. It makes no difference whether he can or can not, neither the patient or the

physician can possibly be benefited by adding the additional handicap of overhead expenses, fraud and red tape known to be inseparable from any scheme of fund-paid medical services. A few years ago, when the Compulsory Health Insurance agitation first began, we did not have at our disposal the statistical data to prove what we all knew in a general way to be the real truth in regard to the impracticability of paying doctor's bills out of insurance funds. Today, thanks to the rapidly accumulating data on the subject, there is, I believe, abundant data to prove to any fair-minded person that the insurance method is not the best method by which to pay the doctor's bills in the ordinary run of illnesses.

As a second fundamental change in the scheme as proposed I would eliminate from the insurance plan all those non-disabling and short-duration disabling illnesses which by no stretch of the imagination can be considered to represent financial disasters which cannot be borne readily by the individual or the family group. The plan of so-called insurance proposed by the Compulsory Health Insurance advocates actually specializes in this type of illnesses, yet to include them means that we must neglect the long-duration illnesses which most need the insurance, and, what is equally bad, it means that a large proportion of the funds must be inevitably wasted because of the premium placed on the over emphasis of minor ailments. The waiting period should be at least two weeks, and in many cases a waiting period of four weeks might be even better, or a waiting period of two weeks, then two weeks of half-rate payments and full benefit payments after the fourth week.

As a third fundamental change I would continue the benefits not for twenty-six weeks as proposed by the Compulsory Health Insurance advocates but until recovery or death. The studies of the Illinois Commission show that the twenty-six weeks' insurance would eliminate only a very small proportion of the poverty caused by illness. The long-duration illness insurance would eliminate almost all of the poverty due to sickness. As I have already shown the elimination of the short-duration illnesses and the fund-paid medical services from the insurance scheme would make it readily possible to extend the period of protection so as to include the long-duration illnesses until recovery or death.

That the great commercial insurance companies are beginning to recognize the necessity

of the long-duration as compared with the shorter-duration sickness insurance is shown not only by the type of long-duration illness policy issued to selected risks which I have already described, but also by the group policy now issued by several companies for factory employes. The policy provides weekly benefits upon proof of total incapacity resulting from sickness or accidental injury. No benefit is payable under the policy for the first seven days of incapacity, nor for the first four weeks of insurance. The benefits are divided into three periods. During the first period of 26 weeks full benefit is paid; during the second period of 234 weeks, or 4½ years, one-half benefit; and during the third period, running to age 65, one-quarter benefit. In order to discourage malingering, the weekly benefit, including any other existing insurance or benefits, is limited to two-thirds of the average earnings for six months prior to incapacity. Special provisions are made for the amount of benefit to be paid in various cases of recurrence of incapacity. The policy is non-participating.

It will be noted that in this policy they have entirely discarded the idea of paying the doctors out of the insurance fund, and that in place of the contract medical service they give 4½ years of one-half benefit and after this period one-quarter benefit to age 65. Although I would myself recommend a two weeks' waiting period and a much longer period of full benefit payments, I do heartily approve of the general principle of the group policy as described above, and I believe that the medical profession can heartily endorse such insurance, which is based on a model fitting American conditions, and which is totally different from the European pauper labor model of so-called health insurance proposed by the American Association for Labor Legislation.

AVERAGE COST PER FAMILY OF DENTAL AND MEDICAL CARE AS PER STATISTICS OF UNITED STATES DEPARTMENT OF LABOR

AVERAGE COST PER FAMILY PER YEAR..\$44.64		
Total families	1,214	
No expense	8	0.7%
Less than \$1.....	5	3.5%
\$ 1.00 to \$ 10.....	201	
\$ 11.00 to \$ 20.....	201	
\$ 21.00 to \$ 30.....	193	
\$ 31.00 to \$ 40.....	154	
\$ 41.00 to \$ 50.....	122	
\$ 51.00 to \$ 75.....	157	
\$ 76.00 to \$100.....	85	
\$101.00 to \$150.....	54	

\$151.00 to \$200.....	20	3.47%
\$201.00 to \$250.....	7	
\$251.00 to \$300.....	5	
\$301.00 to \$350.....	4	
\$351.00 to \$400.....	1	
\$401.00 to \$450.....	2	
\$451 and over.....	3	

Above table is taken from the Report from the Special Committee on Social Insurance of the American Medical Association, 1919, page 34.

VOLKMAN'S CONTRACTURE OF THE FOREARM*

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On March 16, 1903, M. H., aged seven years, living at Vandalia, Illinois, was playing on a hay stack ten feet high, and fell off, breaking both bones of the left forearm at the juncture of the upper and middle thirds. Dr. M. was called and applied anterior and posterior splints, and a small interosseous splint, all of wood, padded with cotton, which were bandaged snugly to the forearm. The splints were removed in three weeks and judging from appearances a good result had been secured. There was good union and an almost normal contour of the forearm.

But the parents soon noticed that the thumb and fingers were closing down into the palm of the hand, and there was little or no sensation in the third and fourth fingers. An effort was made with massage and manipulation to overcome the condition, but it grew worse in spite of all efforts.

In June, 1903, he was brought to the St. Francis Hospital in Peoria. A typical Volkman's contraction of the flexor muscles of the forearm was found. (Fig. 1.) When the wrist was flexed the fingers could be made straight, but the fingers and wrist could not be extended at the same time. The finger nails showed degeneration, the entire hand was smaller than its mate and bluish in color, and there was no sensation in the third and fourth fingers. A radiograph was taken which showed a fracture and faulty union of both bones (Fig. 2), but the fracture of the ulna seemed to be causing the most trouble, judging from the facts that the muscles flexing the fingers lie more to the ulnar side of the forearm, and the third and fourth

*Presented before the Western Surgical Society, Kansas City, Missouri, December, 1919.

fingers, the fingers supplied by the ulnar nerve, were anesthetic.

On June 11, 1903, a longitudinal incision was made along the posterior surface of the forearm over the ulna. The muscles and fascia were



Fig. 1. Showing typical Volkman contraction of left forearm.

separated from the bone, except at the point of fracture where it was impossible. The muscle and fascia had been transfixied by a sharp fragment of the fractured ulna. A portion of the



Fig. 2. Showing mal-union of left radius and ulna.

muscle and fascia was caught in the callus, which had to be cut before the muscle could be freed. A partially organized hematoma, about three centimeters in diameter, was found in the muscle near the site of the fracture and removed.

Neither the hematoma nor the transfixied muscle could be detected by the x-rays.

The ulna was sawed through at the point of fracture with a Gigli saw, and the ends were trimmed off and united in a better position with two aluminum-bronze wires. (Fig. 3.) The muscles and fascia were separated from the fractured point of the radius as much as was possible through that incision. While he was under the anesthetic his fingers were forcibly extended considerably, but it was impossible to extend them completely. The fascia and skin were united with two longitudinal aluminum-bronze wires,



Fig. 3. Showing refractured ulna re-united with aluminum bronze wires.

and the forearm was placed in an ulnar splint of perforated tin.

The patient left the hospital for his home on June 20. An earnest effort was made from then on to overcome the contracture by massage and manipulation of the hand and fingers. After the ulna had united, the muscles of the forearm were thoroughly massaged each day. The boy's mother worked very faithfully with his hand and forearm, and the improvement during that time was no doubt largely due to her efforts. Sensation returned to the third and fourth fingers, and the general condition of the hand became

much improved, but the boy could not extend the fingers.

On August 17, 1903, at the patient's home in Vandalia, a longitudinal incision was made in the center of the anterior surface of the forearm,



Fig. 4. Showing Volkmann's contraction of left forearm completely relieved sixteen years afterwards.

two inches long, beginning at the wrist. The tendons of the flexor profundus digitorum were lengthened by the ordinary stair step method, and the ends were united with catgut. This was not sufficient, so the tendons of the flexor sublimis digitorum were also lengthened. Then all the fingers could be completely extended without resistance. The tendons of the thumb were left alone as its condition had improved very much under the massage. Union occurred by first intention, and in ten days the boy could move his fingers. The improvement from then on was rapid and satisfactory.

A history of the case was published at that time.¹ I have two reasons for reporting this case at this time. First, I want to show you the ultimate results, sixteen years afterwards, of one tendon-lengthening operation for Volkmann's contracture of the forearm. (Fig. 4.) Second, a recent article² says:

"In view of the mechanical shortening of the sclerosed muscles, artificial lengthening of the flexor tendons at the wrist has been tried. The disadvantages of this operation are the extensive dissection which is required and the prolonged after-treatment of the wound."

"A simpler operation is one which shortens the bones of the forearm by excising an inch, or more, of both radius and ulna, so as to allow of the fingers being placed in a position of extension

and even slightly hyper-extension. The patient then has a shorter forearm but a more useful hand. The drawback to this procedure is the tendency to the formation of still more scar tissue by operating on an already sclerosed limb."

The lengthening of the tendons in this case was done at the patient's home, and I did not consider it an extensive dissection. There was no prolonged after-treatment, and I am sure the procedure was much simpler than a resection of the bones of the forearm would have been. The final result in this case shows no deformity, while a resection of the bones of the forearm would have left a shortened forearm.

This patient was received into the Service without question during the late war and served his required time in the army.

Incidentally an x-ray picture (Fig. 5) of the forearm taken a few months ago settles a question that was often asked fifteen or twenty years ago. Was aluminum-bronze wire finally absorbed by the tissues? A good many contended that it was. This picture shows the two loops of



Fig. 5. Showing fractured ulna and radius sixteen years after union with the aluminum bronze wire enclosed in bone and unabsorbed.

aluminum-bronze wire that I put in more than sixteen years ago still intact and unchanged in any way. They have become completely enclosed in bone as the patient grew to manhood. A little piece can be seen lying in the soft tissues that

¹*Interstate Medical Journal*, August, 1909.

²*British Medical Journal*, 1918, II, 151.

evidently fell there when the twisted ends were cut off with scissors at the time of the operation, showing that the soft tissues produce no more impression on an aluminum-bronze wire than bone.

This patient was seven years old when he received his injury, which was in the period of from one to fourteen years when Volkman's contracture usually occurs. It has always seemed to me that there must be other factors besides a tight bandage or we would surely see such cases more frequently. In this case I believe that the transfixing of the muscles by the fragment of the ulna, and the hematoma, with probable impairment of the blood current and blood supply, had as much to do with the ensuing contraction as the splints and bandages.

You will note that manipulation was used before the malunion of the ulna was corrected. The tendons were not lengthened until two months afterward, and during that time manipulation was used. I think it important that manipulation and massage be used until the contracting process has ceased. I had not heard of the Robert Jones method at that time.

SOME PRACTICAL PHASES OF LOCAL ANESTHESIA.*

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In the use of local anesthesia we have not yet reached that ideal of perfection to which all honest effort hopes to attain. However, in the hands of a thoughtful and careful operator it gives such satisfaction that we are stimulated to further endeavor.

Results are what count and ideal results should be our only goal. If I am able to say something that will renew your interest and assist you in obtaining better results or to approach that ideal of perfection in local anesthetic application, that will be my reward.

The various therapeutic preparations, their chemistry and action, and the principles underlying the use of local anesthesia are too well known or readily found in current literature to warrant any repetition at this time. However, I feel that we owe it to ourselves to pause oc-

asionally and spend a few moments in considering the more practical side of this subject and review a few of the points that may enable us to apply those agents with more accuracy and satisfaction.

I have been assured by chemists and other scientists that certain chemical compounds exist which will produce anesthesia when used under proper conditions and further they have assured me that these same compounds are relatively free from any deleterious action. In these men and their formulæ I have placed my confidence and I am frank to state that I have not been betrayed.

Those of us whose duty it is to apply these same formulæ have not the time nor facilities for proving the claims made by their originators, except by clinical application. Surely one needs but little clinical experience to be convinced that their claims are just and right. These preparations are now easily available. There exists at present almost an ideal relationship between the producers of these preparations and the clinician. Practice has so well proven their claims that little discretion need be used in the choice of one of our standard anesthetic preparations. As new Preparations are offered to us great care and close application must be insisted upon before they are received into the family of local anesthetics.

If the same scientific cooperation could exist between the producers of all therapeutic agents and the clinicians as there now exists between the producers of anesthetic formulæ and the clinician, the millenium would be at hand. Unfortunately the action of most therapeutic agents is not as accurate as the local anesthetics and then strictly scientific advance is not in keeping with commercial activity thus the source of error is difficult to eradicate.

The Operator. There are certain phases of the life of the surgeon that must be developed or educated before he can hope to use successfully any local anesthetic agent. First he must learn to approach his patient in such a way as to stimulate confidence and thus enable him to secure the proper amount of cooperation. Until such a time as the fear of pain can be controlled by confidence or some other force your patient will not be in sympathy with your efforts.

Secondly, the surgeon must realize at once that he is his own anesthetist and the proper amount of time and effort to put the part to

*Read before the 70th annual meeting of the Illinois State Medical Society at Rockford, May 19, 1920.

sleep must be consumed before the patient is ready for operation. The present day surgeon has been trained to approach his victim with scalpel in hand and at once makes the incision, while in local anesthetic work he must approach his victim with the hypodermic and sufficient scientific consideration to carry him through a period of ten to twenty minutes or even longer, during which time he will carefully inject the anesthetic and wait patiently for it to take effect. When sufficient time and anesthetic have been consumed the part is ready for operation, just as it is when the ether has been dropped gently and slowly until narcosis is produced. When the surgeon has carefully carried himself and his patient through this stage he is ready for the operation and should proceed just the same as though the patient were in deep anesthesia.

At this time the patient should be instructed that he will feel a tugging sensation as though some one was pulling at his clothing, but he should not complain unless real pain is experienced. When the pulling or tugging sensation is experienced the patient is well convinced that the next second will bring pain and he will often complain when he will admit at the same time that he did not experience real pain.

The psychic side of local anesthesia. Most patients are apprehensive. There are but few with implicit confidence in the efficacy of your flaunted remedy to take away or ward off the pain. Many are stimulated to a high state of excitement by the mere thought of an operation. To be cut is to suffer pain in the minds of all. The elements of fear, pessimism and mental alertness must be well under the operators' control if he wishes to be successful, and the pessimism is the one great factor that must be removed.

Children are more easily influenced from the psychic side than the adult. They are not aware of what operative procedures really mean; they do not think as well for themselves and they are far more open to suggestion.

Allen has made a careful study of this phase of local anesthesia and gives the following resume:

With the attention fixed on the idea that pain is to be inflicted and all the senses keenly alive and active, awaiting the impression, the least touch or manipulation may excite the idea of pain and cause the patient to cry out.

Pain may be to many an incident of little concern;

they are either anesthetic or stoical, feeling very little or are able to control their expression of pain. Others are hypersensitive or hyperesthetic, either being extremely susceptible or they possess little or no control over their feelings. These differences are largely individual, although there exists certain factors as race, age, social and educational status of the individual which influence the susceptibility. It is likely true that the dark skinned races, the Slavs and Teutons are less susceptible to pain than other races as the Latin and Semitic stock. Old age generally is less susceptible than youth or adolescence, due to the more sluggish condition of the nervous system, while infancy, due to psychic influence and poor sense of locality, may bear certain pain well, but is easily shocked by severe trauma.

The social condition, refinement and educational status and occupation have much to do with the susceptibility to painful impressions as we would naturally suppose. Thus a highly refined individual following an intellectual pursuit would be expected from his mode of life, breeding and occupation to have a more highly developed and sensitive nervous system than the laborer or farm hand, accustomed to exposure to the knocks and buffs of hard life. Sensitiveness to pain varies with individuals; a person with a strong will may suffer great pain without flinching, while a mere trifle may cause great complaint from another. Those thin of build and neurotic temperament suffer more than hardy and stout individuals with exaggerated reflexes, as lively knee jerks. The very ticklish and those who are easily startled and highly nervous, bear pain badly, while those not so responsive make less complaint. This establishes an association between reflex activity and sensitiveness to pain.

Advantages of local anesthesia.

1. Local anesthesia has been a great blessing to the operator as well as to the patient, and in many cases its superiority over general anesthesia is so great that the element of comparison does not enter the discussion.
2. It removes at once all the dangers and disadvantages of a general anesthetic and these alone are sufficient to prompt the careful operators to favor local.
3. Does away with surgical shock.
4. Shortens the time of preparation and thus the operation. The patient may be operated upon in the office or immediately after entering the hospital regardless of full meal or other coexisting conditions.
5. It obviates the necessity of calling another man to give a general anesthetic especially in all minor work.
6. Does away with the necessity of a twenty-four to forty-eight hour stay in the hospital,

which is essential following the use of a general anesthetic.

7. Induces many patients to submit to surgical procedures by removing that fear of a general anesthesia.
8. It can be used successfully in some cases where a general is contraindicated.
9. As shown by Geo. W. Crile, local anesthesia blocks the nerve impulse and thus prevents nerve exhaustion, while an ether anesthesia acts like a veneer during an operation and does not prevent traumatic nerve impulses.
10. The operator's peace of mind and clearness of conscience in these cases fully repays one for the extra effort often necessary to obtain good results.

Disadvantages of local anesthesia.

1. That local anesthesia has its disadvantages must be admitted and its use should be determined only by the weight of evidence in favor of or against it in any given case.
2. That it cannot be used in some cases is certain.
3. In other instances the cooperation of the patient as obtained by a general anesthesia is impossible with local.
4. That it may in rare instances interfere with healing of the wound cannot be disproven.
5. That it may increase the dangers of infection is a point well taken.
6. The hypnotics used in conjunction with local anesthesia are not entirely free from danger.

Indications. It was the custom a few years ago to teach that the only indications for local anesthesia were the contraindications for a general anesthesia, but today local anesthesia is certainly indicated in any operation where it can be used with satisfactory results, and when it does not delay the patient's recovery. This has come to include all minor surgery and has so invaded the field of major surgery that the general anesthetic is rapidly approaching the discard.

Contraindications. General anesthesia will always find an important place in surgery and in the hands of the skilled anesthetist its dangers will be lowered to a minimum, and with such skill at the command of the operator many of the major surgical procedures can be carried out more safely and more satisfactorily when general narcosis is obtained.

We are thus safe in saying that local anesthesia is contraindicated when—

1. Local narcosis cannot be produced.
2. When better results are offered by general narcosis.

Preparation of the patient. In a great many instances no preparation is needed **except** that of the field of operation. Most patients who are to undergo a minor surgical procedure can very quickly be persuaded that everything can be taken care of without discomfort to themselves, but when a major or extensive operation confronts the patient it is far more difficult to overcome that element of fear and to allay that pessimistic attitude.

For the average patient it is well that he should enter the hospital the preceding evening and receive the proper preoperative treatment and have the field of operation prepared according to recognized surgical principles. During the few hours just preceding the operation the mental excitement is prone to reach a high tension and in most patients this becomes so evident that unless something is done to counteract it the patient is in an unfavorable state of mind for the use of a local anesthetic.

It is my opinion that in most cases the operator as well as the patient will be able to carry out his part more effectively if this mental unrest is in part overcome by a preliminary hypnotic. In this part of the work I have not followed any fixed rule but have tried to treat each case with due consideration. With the extremely pessimistic and over anxious, more hypnotic is required, while in the more reserved and reconciled, a moderate amount or none, as the operator decides. Morphine, gr. 1-6, and Scopolamine, gr. 1-100, hypodermically about a half to one hour before operation is all that is needed; in other cases a quarter and a fiftieth are required. Chloralhydrate gr. X or XX an hour and a half preceding operation with gr. X three quarters of an hour before, will work well in some cases. While I have not given it a trial, I have every reason to believe that moderate doses of bromides an hour or more preceding would work well in other cases.

When the patient is thus prepared he arrives at the operating table in a condition where he can answer all questions intelligently and is perfectly conscious, but his mental activities are benumbed, to the extent, that he has lost interest

in his surroundings and he is not disturbed by the ghostly appearance of the operator and his associates. When the anesthetic needle punctures his skin he realizes that something has happened, but the sensation of pain is so far overcome that he forgets it almost instantly and rarely makes any subsequent complaint.

Anesthetic preparations. The literature abounds with the merits and demerits of a large number of local anesthetic preparations. Most of these have reached the discard long ago, but there are a few preparations that are definite in their action and have withstood the attacks of scientific onslaught so well that they have rightfully attained an enviable position in our armamentarium. Cocain, one of the oldest and most respected, has such a definite and efficient action that it needs no discussion, but carries with it that reputation of being so treacherous that its use is almost limited to the anesthetizing of mucous and serous membranes.

Novocain, a more recent addition to our list, has gained the favor of numerous operators and has proved itself to be efficient and almost harmless, and since the German patents have been cancelled and American manufacturers permitted to produce it, it is very easily obtained.

Apothesine, about the last to be added to our list, has received very wide endorsement and has been used during the past two or three years probably more extensively than any other local anesthetic preparations. During the recent war novocain was not available for a long time and I soon found apothesine a very serviceable remedy and have used it almost exclusively for more than three years.

It has been found that all these three preparations are efficient in solutions of from a quarter to 1 per cent. Cocaine, being the more toxic, is used in the weaker strength. Novocain and apothesine in solutions of $\frac{1}{2}$ to 1 per cent can be used with the best of success and used in large quantities because of their low toxicity. Of all known local anesthetic remedies apothesine is probably the least toxic. I have used it repeatedly in major operations, three, four and even five ounces of a $\frac{1}{2}$ to 1 per cent solution, and have never witnessed any toxic effects. When injected subcutaneously or beneath the mucous membrane, it fills all the requirements of any local anesthetic, and is for all practical purposes free from any deleterious effects.

Technique. For a detailed technique for the use of local anesthesia I should like to refer you to Braun, who gives very minute instructions for the various operative procedures. However, I want to impress upon your minds that the principal underlying the use of local anesthesia is based upon Crile's proof of the efficiency of cocaine, when injected into a nerve trunk, to produce the so-called "Block" so that neither afferent nor efferent impulses would pass.

When any operation is to be done under local anesthesia, whatever the method or location of the injection of the solution, either the large nerve trunks or the smaller branches are effected and thus "blocked."

It is my impression that in most operative procedures it is not practical nor entirely safe to seek for and inject the main nerve trunks nor even the larger branches, when results can be obtained by moderately extensive subcutaneous injections.

Intradermal applications of a local anesthetic are useless, ineffective and even dangerous if made along the line of incision. It is also true that in most instances deep seated injections are not necessary when the solution is introduced some distance proximal to the operative field. The free use of subcutaneous injections on the proximal side will in most cases anesthetize both superficially and deeply. In laparotomies and in bone work deep injections may be indicated. In abdominal work, when the peritoneum is reached, the use of an angular needle to inject between the peritoneum and the overlying muscle will produce complete anesthesia of all the deeper layers.

Results. Primary union of all wounds other than septic is to be expected. I have yet to see any disturbance in the healing of the wound that I could attribute to the anesthetic; healing takes place as in cases of general anesthesia. All nerve tissue which is reached by the anesthetic has its functions temporarily suspended and this lasts for a period of from one and one-half to three hours. There has never been any excessive scar, keloid or painful scar, nor any evidence of subsequent derangement of nerve function.

Conclusions. As I stated in the beginning of this paper, "Ideal results should be our only goal." With my present experience I am free to say that from an anesthetic standpoint I am in close proximity to an "Ideal." I have but

one failure to record in the last forty cases and that I appreciated then, as I do now, was a very favorable one. R. E. Farr in the *Journal A. M. A.*, December, 1919, records 551 cases with less than 2 per cent. of failures.

The element of time plays a most important part in local anesthesia. After injecting your solution, time must be allowed for it to act, and this varies in different cases and conditions from a few minutes to fifteen or twenty. We are all inclined to impatience, and this alone will lead to failure many times.

The psychic element is extremely important, and unless you can control it you are doomed to failure. Children are more easily influenced than adults.

Those of you who are skeptical should be open to conviction and begin now to re-educate that side of your make-up and thus give your patients the advantages of local anesthesia wherever possible and take away that element of danger that goes with ether and chloroform.

That local anesthetics are a success is undeniable, and this success is yours with but little effort.

We owe it to our patients and ourselves to make more extensive use of these preparations and thereby contribute more to the art of surgery and the science of medicine.

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DISCUSSION

(Abstract)

DR. SLOAN (Bloomington) thought this subject very important and complimented the doctor on one of the best practical papers.

He finds radical operation to remove a gland in the neck is easier to perform with local anesthesia, because the muscles and layers of fascia are differentiated by the anesthetic solution if you inject it.

Inguinal hernia is much easier to do under local than general, injecting first in the subcutaneous tissue and then down in the canal before you cut. If you fill the inguinal canal full of a weak solution, you will have every structure differentiated and it will make the dissection easier.

Amputation of the breast is another operation that is in his experience easier to do with local than with general.

In the serious cases of gall bladder disturbance,

where you need to do a colicystotomy and the patient can't stand general, you will be surprised how easy it is to make the opening down through the abdominal wall and manipulate the patient and the table so that the gall bladder will come right up in the incision.

DR. VAN HOUSEN (Chicago): I would like to ask Dr. Harger if he uses the local anesthesia in carcinoma of the breast and malignant diseases, and if he feels there is any danger of transplanting or grafting the malignant disease; also what he does in cases of wide infection?

DR. BEVERIDGE (Oregon): I would just like to say a few words from the viewpoint of the patient. A few months ago I had an operation for double hernia, direct inguinal hernia on both sides, both sides getting very large, under local anesthesia. I certainly was very well satisfied with the experience. There was absolutely no pain in the cutting or suturing or any part of the operation. I expected pain when they came to pulling up on the sac, but there was no pain at any time worse than the hypodermic injection when the first solution was given. The advantages were that I was able to eat half an hour after I came from the table; didn't miss a meal. I was on the table over three hours, and for that kind of an operation, in the hands of a competent surgeon, one who understands giving a local anesthetic, I think it is greatly to be commended.

DR. HARGER (closing discussion): In answer to Dr. Van Housen's question, I have not used it in carcinoma of the breast, but it can be used, I am sure. I simply haven't had a case where I thought that I could get better results in that way.

In an infection like a felon, I simply inject around the base of the finger and then go ahead and clean out the felon just the same as though the patient were asleep.

With osteomyelitis of the forearm, I make an injection above the elbow. In an operation on the foot and on the ankle or heel, I make an injection subcutaneously completely around the leg. In foot operations, especially, I make an injection above the ankle. In some of those cases, I felt that it was wise to get some of the anesthetic near the main trunk, but never to dissect them out or pick them out and inject.

As a personal experience, I had an operation myself last year under local anesthesia; that was one of the things that stimulated me to further endeavor. It brought this point to me, that in hernia work and abdominal work, I inject subcutaneously an elliptical area around the field of operation, and cut down to the peritoneum. Then I take an angular needle and run it along between the peritoneum and the overlying muscle and inject a little anesthetic around there. I believe that in some of those hernia cases unless you inject around the neck of the sac, the patient is going to suffer pain when the sac is manipulated. I still maintain that it is not necessary to inject into the line of incision either in the skin or the deep tissues. If there are any ill effects from it at all it might interfere with the healing.

In goiter work, I inject at the angle of the jaw and

inject down to the clavicle and then under the chin and just above the sternum, and you are entirely outside the field of operation.

As for the technique of injection, most of you are acquainted with Braun on Local Anesthesia, and he gives a detailed description. I have not followed it closely, but his book is full of good information.

REMARKS ON THE ENDOCRINE SYSTEM*

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Recently the lay press contained some glowing accounts of the rejuvenation to be accomplished by transplanting goat or monkey glands into various parts of the human economy. This shows that even the laity is becoming interested in the "Endocrine System." This paper originally contemplated making a few definite statements regarding the functions of each member of the system, the conditions arising from their over and under functioning, and the indications for their various extracts in therapeutics. But definite statements are hard to make because much of this ground is still debated territory. However, a consideration of their functions shows that they influence oxidation, metabolism and nutrition, and through these the growth and development of body and mind; while the use of their extracts is a distinct and positive aid in all disorders arising from their disfunction.

Susruta, about 1000 B. C., was the first to make use of the internal secretions. His *Liquor Vitae* was a testicular preparation. The *Pharmacopeia Germanica* of the sixteenth century mentions *Cranium Humanorum* and *Oleum Ossium Humanum*. Twenty-nine hundred years then passed between Susruta and Brown-Sequard's testicular therapy—the next effort to master the secretions. Of recent years a great amount of work has been done along these lines, resulting in the development of endocrinology.

The term endocrine system, as used by Eppinger, Hess and others, includes all glands of internal secretion. They are the pituitary, thyroids, parathyroids, thymus, adrenals, pancreas, ovaries, testicles, the pineal body and the spleen.

The adrenals, pituitary, thyroid and parathyroids are functionally united forming the "Ad-

renal System." This is also called the "chromaffin system," because the chromaffin tissue is the adrenalin-producing tissue, according to Eppinger and Hess, who states: "The so-called chromaffin cells are the adrenalin forming cells." The term was first used by Stilling. It is a grouping of tissues according to a staining reaction.

The function of the adrenals is to sustain pulmonary and tissue respiration. Embryologically the adrenal cortex resembles the interstitial cells of the ovary. Bandler believes the cortex is the more important element from the standpoint of the gynecologist. The adrenals are responsible for the Chloasma of pregnancy. In rabbits removal of the ovaries causes hypertrophy of the adrenal cortex; and, also, the reverse is true.

Hyperadrenia means hyperoxidation and hyperactivity of all organs resulting in glycosuria, psychoses and pulmonary edema. Of the hyperactivity of the cortex alone the stigmata are: overgrowth of hair, marked muscular development and obesity in males, while a child may attain the size and characteristics of an adult. We know the chemical formula of adrenalin and have produced it synthetically.

In hypoadrenia the stigmata are: muscular weakness and emaciation, weak heart and pulse, low blood-pressure, constipation, sensitiveness to cold, defective hair growth, pallor, mental torpor, and slow intellection.

Sajous holds adrenal preparations exceed other means in Addison's disease, in surgical heart-failure, toxemias, capillary hemorrhage, asthenic cardiac disorders and asthenia.

The best known test for adrenal insufficiency is Sergeant's "white-line" test. It is obtained most readily by having the patient lie quietly in bed for a short time and then stroking the skin, preferably of the abdomen or thigh, lightly with the palmar surface of the index finger. In ten to twenty seconds there will appear a blanching of the skin thus stimulated. Previous emotional disturbance will nullify the test.

Of the pituitary the anterior and posterior lobes exercise different functions. The anterior has to do with the growth of the skeleton, the development of the genitalia and secondary sex characteristics. It presides over muscle tonus and to a less extent over temperature, pulse and blood pressure. The anterior also is concerned with the size, shape and arrangement of the

*Read at staff meeting, Washington Park Hospital, April 2, 1920.

teeth and the amount and distribution of the hair. Its hypo-activity before puberty results in an undergrowth of all bones. The person so affected is apt to be short, to have small hands and feet, with a broad feminine type of pelvis. The genitalia will be infantile and the secondary sex characteristics absent. The temperature will be subnormal, the pulse slow and the blood pressure low. Its postadolescent hypo-activity results in an undergrowth of the short and flat bones only; the long bones will be normal, having already largely attained their growth. The temperature, pulse and blood pressure are all apt to be subnormal.

The preadolescent hyperactivity of the anterior lobe results in an overgrowth of all bones—gigantism—with an overgrowth or at least normal development of all parts and functions of the body. Its postadolescent overactivity is accompanied by an overgrowth of the acral, short and flat bones—acromegaly—with a short or normal stature.

The posterior lobe presides over metabolism, carbohydrate tolerance, adiposity polyuria, involuntary muscle contraction and somewhat over the nervous system. Its underactivity is accompanied by a decreased basal metabolism and an increased carbohydrate tolerance. There is a marked girdle, mons and mammary adiposity. Involuntary muscle contractions are weak or absent. There is mental apathy and frequently somnolence present. Hyperpituitarism of the posterior lobe gives rise to an increased basal metabolic rate and a decreased carbohydrate tolerance. Adiposity and polyuria are absent. Involuntary muscle contractions are present and there is frequent intestinal spasticity. There is also hyperactivity of the thyroid and psychic instability.

Therapeutically Bandler states that it has a decided effect in reducing the size of the uterus and in reducing the flow in menorrhagia and metrorrhagia, especially when combined with mammary extract. Lately it has been used with some success in the treatment of epilepsy. We are much more familiar with the extract of the posterior lobe. The tale of its use and abuse in obstetrics alone would make a chapter. It is used with great success in the treatment of undersized or backward children, and in post-operative shock and intestinal atony.

In cardiac disorders, it raises the arterial

tension and corrects purely functional disorders of rhythm. Lenard Williams regards pituitary preparations as superior to any other remedy in the "runaway heart of toxic states."

In infectious diseases Rénon and Azam give these phenomena as indicating the need of pituitary:

1. A fall of the arterial tension.
2. Quickening of the pulse and consequent insomnia, anorexia, abnormal sweating and heat flushes.

Under the use of pituitary there occur:

1. Increase of arterial tension.
2. Slowing of the pulse with increase of power and amplitude.
3. Increased diuresis.
4. Increase in weight.
5. Hastening of convalescence.

In acromegaly pituitary extract relieves the headache, lethargy and amnesia.

In exophthalmic goiter Rénon and Délille report considerable improvement by use of pituitary gland.

The marked advantage of pituitary preparations is that they sustain the rise of blood-pressure, which they produce, much longer than does adrenalin. They sustain temperature and muscular tone longer than adrenalin and with the advantage that they can be administered by mouth without compromising their effects. The latter is Sajous' point but Christian states that pituitary substance, in liquid form, introduced *subcutaneously*, had a striking effect on urine excretion (decreasing it to normal if sufficient gland substance was used), whereas other ways of giving gland substance had a negligible effect.

In regard to the thyroid gland, its function and the consequences of its removal and of its hyperactivity are well known. But the subject of hypothyroidia is not so generally understood. The usual symptoms are: subnormal temperature, cold extremities, myxedematous or dry, doughy, scaly skin, dry, brittle hair and nails, and mental deficiency. When subthyroidism is combined with adrenal insufficiency Blumgarten adds these symptoms: persistent pains in the neck, spine and lumbosacral region.

Thyroid extract in small doses, especially in hypothyroidia, results in a rise of temperature, enhanced metabolism, increased appetite, marked improvement in general nutrition and strength, rapid growth and the cerebro-spinal system is in-

fluenced through the wealth in phosphorus. Thyroid preparations are valuable, especially in:

1. Diseases due to slowed destruction of toxic wastes—as in tetany, epilepsy, eclampsia, disorders of the menopause, and asthma.

2. In diseases due to lowered general nutrition of all tissues, including the bones—as in cretinism, myxedema, osteomalacia and rickets.

3. In disorders due to lowered nutrition of the muscular elements—in general adynamia, neurasthenia and myasthenia.

4. And in all cases in which the process of repair or absorption are deficient—as in delayed union of fractures and bone necrosis.

Berkeley feels that the underlying cause of dementia precox may be excess of thyroid. Bandler believes it is due to some interglandular upset not necessarily the thyroid.

There are two tests for hypothyroidia. The therapeutic test and the measurement of the basal metabolism. In a suspected case if the administration of desiccated thyroid, gr. I, t. i. d., for two weeks does not cause an improvement, the therapeutic test is negative. The measurement of the basal metabolism is much more accurate. It is performed as follows: the patient goes to the laboratory in the morning without breakfast. He lies quietly in bed for twenty minutes, during which time his pulse, respiration rate and blood-pressure are taken. The test proper is begun by tying a mask over the patient's face and collecting the total expired air over an accurately timed period. Its volume is measured and the temperature and barometric pressure recorded. Samples are analyzed to determine the percentage of oxygen and carbon dioxide. From these data the total hourly heat production can be calculated and the results compared with normal standards. Variations of 10 per cent. are disregarded.

The function of the four parathyroids is to neutralize toxic substances formed elsewhere in the body. They are concerned with the regulation of metabolism of the guanidin compounds in the body. Gley has shown the proportion of iodine in them is much greater than in the thyroid proper. The action of the parathyroid hormone is similar to that of ergotin.

Hyperactivity is associated with exophthalmic goiter. Lunborg and Berkeley feel that paralysis agitans is specifically the syndrome of hyperparathyroidia. Berkley first used parathyroid ex-

tract in cases of paralysis agitans; a large proportion responded slowly, the rest showed marked improvement. He states that the administration of parathyroid extract by mouth or an acetic acid extract of the fresh gland in solution has been given in this disease with benefit.

Hypoactivity is seen in infantile tetany and in intestinal tetany.

The thymus is concerned with the process of growth. It and the pineal body are glands which should atrophy at puberty. If they cease functioning before, precocious puberty results; if they persist after, infantilism and sex reversion result. The function of the thymus is to supply the excess of phosphorus in organic combination needed for development and growth. It produces nucleins until the bone marrow and the lymphatic glands can take up the work.

Removal of the thymus in animals results in stunted growth, soft and deformed bones (later becoming brittle), somnolence, depression, cachectic coma and death—in general the condition resembles rickets.

Overfunction is distinguished by marked emaciation, dilation of the heart, and sweating, all of which occur because the thymus is an organ of only temporary usefulness and if it continues active when the bone marrow and the lymphatic glands are able to produce nucleins, an excess of nucleins results.

Thymus deficiency means inadequate assimilation of calcium and a low lymphocyte count and produces stunted growth and bone deformities, rickets or osteomalacia, deficient mental development.

Thymus extracts in simple goiter are very efficacious. Solis-Cohen states that in exophthalmic goiter it sometimes lessens the nervous symptoms. It is of doubtful benefit in rickets. Some observers claim good results in arthritis deformans.

Besides acting individually, these glands apparently combine in various ways for team work. The thyroid, parathyroids, adrenals and pituitary have been mentioned as forming the immunizing mechanism of the body. The fact that the Schick test shows one child immune and another not, is probably due to a more active adrenal system in the immune individual.

The pituitary, thyroid and ovaries are closely allied. At the menopause the cessation of ovarian function is apt to be accompanied by a dim-

ination of function in the thyroid and pituitary. More cases of non-operative myxedema occur at this period than at any other. Many disorders of the menopause not relieved by ovarian therapy are promptly benefited by the addition of pituitary and thyroid extract.

The reproductive organs are stimulated by the following extracts: ovarian or testicular, thyroid, suprarenal and posterior pituitary. They are depressed or inhibited by thymus, mammary, anterior pituitary and, probably, placental extract.

It is not definitely known that there is an internal mammary secretion. But administration of the extract in 7 to 10 gr. doses, *t. i. d.*, has a very good effect in menorrhagia, metrorrhagia, fibrosis uteri. It acts particularly well when combined with anterior pituitary extract. Bandler claims some good results and Dalché has used it in these conditions for several years.

Such in general is the work of the adrenal system. On the other hand, the pancreatic secretion probably holds the adrenal system in check. This fact is made use of in the treatment of hyperthyroidism. The feeding of pancreatic extract is very beneficial in the "heart hurry" of this condition.

The main function of the spleno-pancreatic secretion—trypsin—is to continue in the bloodstream the cleavage processes begun in the intestinal canal. Eppinger and Hess hold that the pancreatic hormone—"autonomin"—antagonizes adrenalin. Loewi's is the simplest test for pancreatic insufficiency and consists of dropping into the conjunctival sac a few drops of a 1:1000 solution of adrenalin and watching for dilatation of the pupil.

The doctrine of the correlation of the different internal secretions has been especially emphasized by the Viennese clinicians, Hans, Eppinger, Falta and Rüdinger. Eppinger and Hess have also applied the ideas of Gaskell, Langley and Sherrington as to the opposing functions of the two "autonomics" of the sympathetic system in the elucidation of the complex mechanism of the physiological equilibrium and of visceral neurology. They postulate two opposing diathetic conditions—vagotonus and sympathicotonus, described in 1892 by Solis-Cohen as "vasomotor ataxia."

While much of this is in dispute, it seems probable that the chemical hormones act via the

blood upon the central nervous system, while the two opposing autonomics of the sympathetic system control the ductless glands and the visceral organs made up of smooth (involuntary) muscle.

By vagotonia is meant a lasting tonic irritation in the realm of the autonomic system, which maintains its end-organs in a state very closely resembling that produced by electrical stimulation. In vagotonic cases are found enteroptosis, neurasthenia, hysteria, high-arched palates, flat foot and syndactylia. It occurs most commonly in youth. It improves with age and may disappear—and, later, may reappear. According to Eppinger and Hess, patients may alternate between the vagotonic and sympathicotonic states and on this theory they discuss Basedow's disease.

The vagotonic system consists of the oculomotor, glossopharyngeal and vagus. In function it balances the sympathetic system. Vagotonia—or excessive peripheral sensitization—is definitely associated with the disturbance of some endocrine gland or glands, especially the thymus and thyroid.

Briefly, the symptoms of vagotonia are: subjective palpitation, sweating, tremor and general nervousness. Certain drugs exclusively influence the vagotonic system: atropin, physostigmin, muscarin and pilocarpin. An injection of 0.1 gr. pilocarpin produces a marked reaction, *i. e.*, an increase in pulse rate, a rise in blood-pressure, marked perspiration and a great increase in salivary secretion. It is a stimulant to the vagotonic system but a paralyzant to the sympathetic. Eppinger and Hess feel that because pancreatic secretion acts in opposition to the adrenal system, the stimulus for the vagotonic system may be found in the pancreas.

There are only two tests for determining the functional activity of the autonomic system:

1. The oculocardiac reflex test of Asher, which consists normally in a change of the heart's rate following pressure on one or both eyeballs.

(Take normal pulse rate; then press on the eyeballs one minute; in hypervagotonics the pulse rate is slowed more than ten beats to the minute; while in sympathicotonics the reflex will be unaffected.)

2. The pilocarpin test.

The analogue to vagotonia is sympathicotonia. This is dependent on normal functioning of the adrenal glands and the entire chromaffin system.

These groups of cells yielding adrenalin maintain the sympathetic end organs in a state of tonic contraction so that but a small sympathetic impulse suffices to produce a large effect.

The stimulus for the sympathetic is adrenalin, while in vagotonia there are only substitutes for the yet undiscovered stimulant. Sympathicotonia is dominated by adrenalin production; arrest this and vagotonia takes the upper hand. Hyperfunction of the sympathetic system results in the state sympathicotonia whose symptoms are mydriasis, tachycardia, vaso-constriction, hyperesthesia to temperature changes, deficiency of perspiration, transitory vertigo, nasal catarrh, diminished gastro-intestinal functions.

Adrenalin acts solely on the sympathetic system and its action is similar to that of electrical stimulation of the sympathetic fibers. The test for sympathicotonia consists of the injection of 1cc. of adrenalin intramuscularly, which causes a marked tremor, nervousness, increase of blood-pressure and blood sugar. Such a reaction stamps the patient definitely as a sympathicotonic and the administration of adrenalin will do harm usually.

Psychotherapy is of value in the early stages of treatment to divert attention from the organ complained of, and pilocarpin 0.1 gr. t. i. d. is given to increase gastric or pancreatic secretion; or physostigmin gr. 0.01 to 0.02 t. i. d. for in intestinal atony.

Recognition of the states vagotonia and sympathicotonia clarifies many a difficult case. Januschke likens these two opposing diathetic conditions "to tuning keys, by means of which we can operate the complicated stringed instrument of the body, and voluntarily make one string tighter to increase its vibrations or another looser to dampen its function."

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FOCAL INFECTION IN THE HEAD AND ITS RELATION TO SYSTEMIC DISEASE*

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The subject of focal infection is much older than modern medicine. As far back as 1789, Eyerlen of Christiana, in his "*Materia Rheumatica ad Tonsillitis*," associated tonsillitis with rheumatism, but it remained for Poynton and Paine of England in 1900 to prove that acute rheumatic fever is caused by the streptococcus rheumaticus, and that the primary focus of infection is usually in the tonsils. Dr. Benjamin Rush, in 1801, noted the clinical relationship between dental focal infection and arthritis. He recommended the extraction of an abscessed tooth in a case of arthritis of the hip, which resulted in an immediate cure. In 1875, Dr. John W. Riggs, a dentist of Hartford, Conn., called attention to pyorrhea alveolaris as a cause of systemic disease. In 1909, Billings and Rose-now¹ made epoch-making contributions to the subject of focal infections, based on extensive clinical, bacteriological and pathological studies, which have placed the subject on a permanent scientific foundation.

I. THE INFECTIOUS FOCI

While about 75 per cent. of these foci are located in some part of the head, as the teeth, tonsils, adenoids, accessory nasal sinuses, middle ears and mastoids, we must not forget the other infecting areas of the body, namely, the genito-urinary tract, the lower respiratory and the gastro-intestinal tracts. The incidence of focal infection about the head is high, but the incidence of metastatic infectious disease is low. Statistics vary considerably as to the relative frequency with which foci are found, both in individuals apparently not suffering from any metastatic infection and in individuals suffering from metastatic infection.

Kreuscher², in 1916, in a review of 900 cases of metastatic arthritis, found the tonsils diseased in 25%, the teeth in 18%, the sinuses in 17%, and in a more recent series of fifty-two cases, he found the sinuses diseased in 26%, the teeth in 24% and the tonsils in 21½%, Neisserian,

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11½%, seminal vesicles and bladder, 6½%, lungs and bronchi, 6½%, scarlet fever, 2%, and localized skin infections, such as boils and carbuncles, 2%. The percentage of the cephalic group, i. e., sinuses, teeth and tonsils, amounts to 71% of the total.

Moorehead³, in 1916, in Billings' clinic, found chronic alveolar abscess in 89% and pyorrhea in 76% of 498 cases of chronic arthritis; in 150 cases of systemic disease, 69% showed alveolar abscess. Seventy cases, excluding arthritis and including myositis, neuritis, goiter, asthma, nephritis, etc., showed chronic alveolar abscess in 74% and pyorrhea in 49%.

Gibbes⁴, in a study of 500 private patients, found oral sepsis (pyorrhea and apical infections) in 25%, of which 25% had arthritis; or, putting it in another way, arthritis was absent in 75% of the cases of oral sepsis.

A. D. Black⁵, in a tabulation of 600 adults, found that 78% had definite areas of bone destruction about the teeth as shown by Roentgenograms. Seventy-two per cent. reported as having no apparent systemic disorders, 14% complained of occasional muscular or joint symptoms and 13% reported well-defined cases of arthritis, nephritis, etc. About two-thirds of the latter cases occurred in persons over 40 years. From this data we may conclude that while 72% were subjectively in good health, 78% showed apparent dental focal infection, or in other words, while the majority enjoyed good health, they also harbored dental foci of infection.

Irons and Brown⁶ found dental infections (apical infection and alveolar abscess, but pyorrhea was not included) in 18 and diseased tonsils in 16 of 100 cases of iritis. Lange found 65% of 215 eye infections due to pyorrhea.

Steinbugler⁷ states that 50% of all adults have pyorrhea. Ulrich found that apical abscesses were present in 83% of dead teeth, and in over 68% of artificially devitalized teeth. Latent dental infections are often found in persons not suffering from metastatic disease. Out of 81 patients at the Robert Bright Hospital, Boston, Thoma⁸ found 90% that had latent dental abscess. H. G. Beck⁹ reports on the relationship of chronic focal disease and hyperthyroidism as follows: 56 out of 100 cases showed head focal infection, of which dental pyorrhea alveolaris and alveolar abscess constituted 57%, chronic infected tonsils 40%, and sinusitis 5%.

Irons¹⁰ in 329 cases variously grouped, x-rayed 124, and 44% of these were found to have alveolar abscess. In the arthritis group, alveolar abscesses were present in 76%, in the nephritis-cardio-vascular group in 47%, and in the respiratory and gastro-intestinal group, 23%. The tonsils were involved in 45% of the arthritis group, in 24% of the nephritis-cardio-vascular group, and 19% in the remainder. Chronic sinus or genito-urinary infection were present in 21% of the arthritis group, in 13% of the nephritis-cardio-vascular group, and in 11% of the other diseases.

II. BACTERIOLOGY

Billings¹ states infected tonsils and adenoids may yield cultures of streptococcus mucosus, streptococcus viridans, streptococcus hemolyticus, micrococcus catarrhalis, pneumococci, B. influenza, B. diphtheria, B. pseudo-diphtheria. The crypts of the tonsils are an excellent breeding place for the streptococcus, for they seem to thrive better here than any other organism. Crypt cultures are more often positive than surface cultures. Cultures taken from different parts of the nose, mouth and throat show more streptococci in the tonsils. Out of 25 cases of acute follicular tonsillitis, only one failed to show a culture of hemolytic streptococci. Of 100 pairs of excised tonsils which were removed on clinical grounds, on account of size, presence of discharge from crypts, cervical glandular enlargement and possibility of focal infection, 75% showed hemolytic streptococci (Nichols and Bryan).¹¹

D. J. Davis¹² in series of sixty-one pairs of tonsils extirpated mostly from children, for various reasons, chiefly hypertrophy, but many of which appeared quite normal, found hemolytic streptococci in 90%, and in a series of 24 normal persons, found cultures from the throat and pharynx positive for hemolytic streptococci in 58%; in 19 persons without tonsils, cultures were positive in 15%, and in these persons were found either bad teeth or stumps of tonsils. Pilot, in 100 cases of ordinary hypertrophy without acute inflammation, after extirpation found the hemolytic streptococci in the tonsil crypts in 97% of the tonsils. Davis¹² points out that inasmuch as the crypts of the tonsils are the main habitat for hemolytic streptococci, perhaps they are as normal to the tonsil crypts as the streptococcus viridans is to the buccal mucosa, the staphylococcus albus to the skin or colon bacillus to the

intestine. The hemolytic streptococci are much more virulent than the streptococcus viridans.

Rosenow found the streptococcus viridans in tonsils in a large percentage of the endocarditis cases. Hemolytic streptococci are often found in cultures from sinus infections. Streptococci are found in 30% of the cases of acute otitis media after paracentesis (Voight).¹³

Hartsell¹⁴ has shown that the streptococcus viridans is present in chronic dental abscess and pyorrhea, and is usually of low virulence, but may produce lesions of the heart, kidneys and joints.

Lescohier¹⁵ in seventy cases of pyorrhea showed that the streptococci takes the leading role.

The streptococcus group causes more primary infections of the upper respiratory and gastrointestinal tracts than all the other organisms combined, and is principally concerned in the production of secondary foci of infection. They seem to have a selective affinity for the lymphoid tissue and the mucous membrane of the nose and throat.

III. DIAGNOSIS

a. Dental Infection. Dental infection is the most frequent focal cause of systemic infection (25-90%). The presence of dental focal infection is easier to diagnose than any other on account of the great aid given by x-ray. There are two general sources of infection about the teeth, viz.: blind abscess (apical abscesses or alveolar abscesses) and pyorrhea alveolaris. Pyorrhea is usually self-evident. We should look upon as greatly suspicious all crowned and bridged teeth, devitalized and filled teeth, until proven otherwise by x-ray films. A comprehensive dental report with x-ray findings should be made a part of each record whenever there is suspicion that the teeth may be the source of infection.

b. Tonsillar Infection. After the teeth, the tonsils come next in frequency as the focal cause of systemic infection (25-50%). Tonsils have a marked tendency to retain infectious matter. This is noted clinically in diphtheria and streptococcus carriers, and in recurrent acute tonsillitis and peritonsillitis. This may be on account of the anatomical structure of the tonsils with its folds and crevices. Its crypts may be looked upon as culture tubes, which almost always con-

tain streptococci. The cheesy masses often found in the tonsillar crypts, in the supra tonsillar fossa, and between the tonsil and the anterior and posterior pillars, are composed of desquamated epithelium, living and dead leucocytes, bacteria and food particles. By making firm pressure with a blunt instrument on the anterior pillar, thus everting the tonsil, the cheesy concretions or puriform fluid will be forced out of the crypts. The presence of these cheesy masses is not always significant of the retention of infected material for, according to Davis,¹² "Excepting in acute infections of the tonsils, the cheesy or purulent-like material that exudes from the tonsillar crypts on pressure is less likely to contain hemolytic streptococci than the empty crypts, and much of the fluid material expressed from the tonsils, commonly called pus, is not purulent when examined microscopically." Partial occlusion of these crypts occurs from repeated attacks of tonsillitis or from scar tissue resulting from cauterization or incomplete tonsillectomy. Stumps of tonsils, the remnants of previous operations, are the seat of retained infection on account of sealing up of the tonsillar crypts by the operation scar imbedding the tonsillar stump in adhesions. Crowe, Walker and Rotholz¹⁶ report eight cases of infectious arthritis after incomplete tonsillectomy, and Loeb¹⁷ reports five such cases. Regarding the size of the tonsil, the small submerged tonsil will often retain more infection than the larger pedunculated type. A submerged tonsil is a tonsil that is more or less covered by its pillars and having only a small part of its surface exposed to view, and consequently this favors the retention of cheesy deposits from the tonsillar crypts. On account of the poor drainage of its crypts, the submerged tonsil and the tonsil with a large upper lobe hidden in the supratonsillar fossa is the type of tonsil most frequently associated with focal infection. As a general law, it may be stated that the tonsil becomes diseased and is therefore dangerous proportionately as its drainage is obstructed. A large pedunculated tonsil, not associated with the history of tonsillitis, and showing no evidence of cryptic retention and not causing any mechanical disturbance, is harmless, because drainage is best in this type of tonsil. Persistent tonsillar hypertrophy in adults may of itself be an evidence of chronic infection. Previous attacks of tonsillitis or peritonsillitis

signify a diseased tonsil. Dowd found the tonsil lymph gland situated at the angle of the jaw was enlarged in 86%, and most of these patients gave a history of tonsillitis or pharyngitis. A chronically inflamed tonsil, often associated with redness of the throat, and particularly of the anterior pillar, regardless of its size, is invariably a diseased tonsil, and especially so when found in a non-smoker. Sometimes diseased tonsils are apparently normal in appearance, the patient denying any previous tonsil disease, and yet the tonsils on removal will disclose an abscess. To positively exclude infection of the tonsils by inspection alone is impossible, as the most innocent looking tonsil may be the most potent from the standpoint of focal infection. The presence of a chronically diseased tonsil does not necessarily imply the absorption of infection from this source, provided that its drainage is not seriously interfered with, but of greater significance is the fact that this type of tonsil may sooner or later flare up with an acute virulent type of infection.

c. Other Lymphoid Infections in the Nose and Throat Are:

1. Adenoids. On account of better drainage of its crypts, it is less likely to contain a focus of infection than the tonsils. The adenoids, especially in the fossa of Rosenmuller, may be secondarily infected from purulent secretion from the sphenoid and posterior ethmoid sinuses and the Eustachian tube. Infection of the nasopharynx is often evidenced by enlargement of the post-cervical glands. An acute adenoiditis due to the streptococcus may cause acute hemorrhagic glomerulo-nephritis, especially in children, and is frequently associated with acute tonsillitis.

A rare disease of the adenoids known as Thornwaldt's disease, in which there is a chronic suppuration in a canal in the recessus medius or groove between the lateral halves of the adenoids, may be the source of chronic focal infection. I recently operated upon a case of Thornwaldt's disease in which chorea had been present for eighteen months during this time the chorea had been under efficient medical treatment but without any improvement. Three days after adenoidectomy it was noted that the chorea became greatly lessened in severity and progressively improved until after the seventh day when all involuntary movements and twichings completely disappeared and have not recurred to date (four

months later). The rapidity of the improvement and the apparent cure after removal of the focal infection would seem to justify the conclusion that the focal infection in this case had a direct etiological relationship to the chorea.

2. Lingual Tonsils. The crypts of lingual tonsils drain well, because they are wide, short and straight, and consequently are rarely the cause of secondary infection. Sluder,¹⁸ however, recently reported five such cases, and stated that it is not so rare as is generally supposed.

3. The lymphoid masses on the lateral pharyngeal wall, situated behind the posterior pillars, and the lymphoid follicles on the posterior pharyngeal wall, are not infrequently involved in an acute follicular inflammation, with or without associated tonsillar involvement. Apparently the lymphatic tissue of Waldeyer's ring is an excellent culture medium for the streptococcus. Davis¹² states that the lymphoid tissue of the throat has a protective mechanism against bacterial absorption, but that this mechanism breaks down in hemolytic streptococcus infections.

d. Ear Infections: The acute and chronic suppurative ear diseases, viz., otitis media and mastoiditis, while not uncommon, are rarely the cause of focal infections. This is because drainage is not sufficiently interfered with to produce absorption of the infection. Palen¹⁹ believes the percentage of systemic infections from aural disease is relatively as large as that from the tonsils, sinuses and teeth as the actual increase in the percentage of systemic infections from the tonsils, sinuses and teeth is due to the greater frequency of foci in these parts as compared with the aural foci.

e. Ocular and Extra-Ocular Infections. While some of the suppurative disease of the eye and its adnexa could be considered as possible foci of infection, viz.: panophthalmitis, orbital cellulitis and abscess, acute and chronic dacryo-cystitis, this seldom, if ever, occurs.

f. Accessory Nasal Sinus Infections. After the teeth and the tonsils, sinus infections come next in frequency (5-25%), in cephalic focal infection. Brown and Irons⁶ state that in spite of able assistance and the recent advances in roentgenographic and clinical diagnosis of sinus disease, they have experienced more difficulty in the diagnosis of the presence or absence of infected sinuses than that of any other region of

the body. Suspect all coryzas that become chronic, all chronic muco-purulent nasal discharges, and all head colds that complain of tenderness over the frontal or maxillary sinuses, especially when associated with morning headaches, as indicating sinus trouble. Trans-illumination is of value in the maxillary and frontal sinuses only. The maxillary, frontal and sphenoid sinuses can be washed out via the natural openings to determine the presence or absence of pus, and if this is anatomically impossible, resort can be had to diagnostic puncture. Roentgenograms are a decided aid in the diagnosis of sinusitis, and no suspect sinus case should be considered thoroughly examined until a good roentgenogram has been obtained. The most frequently involved sinus is the antrum of Highmore, and this is probably more often involved than all the others combined. In antrum cases, it is well to examine the upper bicuspids and the first and second molars, as about 25% of these cases are of dental origin; an infected root penetrates and infects the antrum. After the antrum, in point of frequency, the ethmoid, frontal and sphenoid sinuses are involved. Haike, in a radiographic study of the accessory nasal sinuses in children, finds the antrum most often diseased, after which comes the ethmoids. In L. W. Dean's²⁰ investigation of sinusitis in children, he studied 234 children, thirteen years or younger, suffering from adenoids, and found that in 34 cases, or about 15%, a chronic empyema of one or more sinuses was found. The symptoms were sneezing, recurrent stoppage of the nose, frequent colds, nasal discharge and headaches. He states, "In cases of severe systemic infection and inability to localize the focus of infection, an exploratory operation of the sinuses, especially the ethmoid, is indicated unless the complete absence of discharge in the nose, perfectly normal turbinates and mucous membrane, contra-indicates sinusitis."

g. Latent Focal Infection. The diagnosis in this class of cases is often very difficult and in many cases can be only surmised, on account of absent signs and symptoms. Frequently the accessory nasal sinuses and teeth are causing the trouble. In adults past middle age, suspect the teeth and sinuses, and in children and young adults the tonsils and adenoids.

h. Co-incident, Combined or Multiple Focal Infection. These are frequently found in the

same individual, especially involving the tonsils, teeth and accessory nasal sinuses. Infectious matter from the teeth or sinuses will infect the tonsils. It is often difficult or impossible to tell which is the active source of infection, but fortunately this can be practically disregarded, as in the treatment all the areas of infection should be cleaned up and eliminated. Of more importance to the patient is the early recognition of the presence of infection in any part of the body. It is also possible for the secondary foci to act in the same manner as the primary focus, that is, the joints of infectious arthritis, infected lymphatic glands, etc., may cause other metastatic infectious disease, and in this manner a vicious circle may be established. We must not overlook the frequent association of focal infection with syphilis and tuberculosis, so that in all suspicious cases a thorough clinical, bacteriological and serological examination should be made. In some of these cases it will be very difficult to correctly appraise the relative importance of the various causative factors. Indeed, the differential diagnosis between incipient pulmonary tuberculosis without definite lung finding and focal infection is sometimes very difficult or impossible, as the symptoms due to the absorption of the products of bacterial infection are identical, namely, the malaise, anemia, general weakness and loss of vitality, often associated with a slight rise in temperature. It is a well known clinical fact that one infection may stimulate another into activity, e. g., the presence of an active focal infection may cause an unsuspected or inactive tuberculous lesion to become active. Miller and Lusk have shown that this phenomenon occurs quite frequently.

IV. TREATMENT

a. Prophylactic. In general it may be stated that the incidence of metastatic infectious disease depends upon the incidence of focal infection. It therefore follows that if focal infection can be reduced in frequency, the resultant systemic diseases ought to be reduced proportionately. Statistics are now getting into the literature (Lambert),²¹ which prove the correctness of the above conclusion. Much has already been accomplished in this field of preventive medicine but there is much more to be done. The public is getting to understand the necessity of this prophylactic work through the continuous and

united efforts of the dental and medical professions, the health boards, the schools and the press.

b. Active. This consists in the elimination of the foci of infection by operative removal (tonsils, teeth, mastoid), and where this is not possible, by providing adequate drainage (sinuses, middle ear) together with general measures to increase the resistance of the patient (tonics, dietetics and hygiene). It is superfluous to remark that the removal of focal infection cannot remove permanent pathological changes in organs and tissues resulting from metastatic infection. Tonsillectomy during the acute stage of chorea, acute inflammatory rheumatism or acute endocarditis, is contra indicated. The removal of tonsils during an attack of acute inflammatory rheumatism, with or without cardiac complication, does not modify its clinical course, because this disease is the result of a bacteremia, which is usually secondary to an acute tonsillitis. The time for the removal of tonsils in these cases is after convalescence, when the patient has regained strength and vigor. The recurrence in some cases of acute inflammatory rheumatism after removal of tonsils and adenoids may be explained on the supposition that the streptococci gain entrance to the systemic circulation via another route, that is, sinuses, teeth, pharynx, etc. In acute glomerulo-nephritis with hematuria, the usual cause of which is an acute streptococcus tonsillitis, Billings states that the tonsils should be removed early. In the Johns Hopkins¹⁶ Hospital series, 70% of the infectious nephritis showed normal urine in from eight months to three years after removal of tonsils. Rheumatoid arthritis, if well advanced, according to the experience at Johns Hopkins, is not improved by tonsillectomy if there is no other indication for operation, and tonsillectomy has not proven a satisfactory prophylactic or therapeutic measure in chorea.

In chronic infectious forms of arthritis, the focal causes should be removed as early as possible. In the Johns Hopkins Hospital cases approximately 80% were cured, 10% improved and 10% not improved after removal of tonsils. Lyman,²² in a questionnaire submitted to laryngologists and internists requesting information regarding the results obtained by tonsillectomy in cases of arthritic, cardiac, renal and other systemic diseases, included 894 cases, of which cures resulted in 63% of the arthritic cases and

in 68% of the renal cases, and considerable improvement in 30% of the arthritic, and in 16% of the renal cases, and no improvement in 16% of the renal and in 21% of the cardiovascular cases. With regard to the thyroid gland and focal infection, Billings emphasizes the frequency with which hyperthyroidism occurs in young women with focal infections, in the form of alveolar abscess, tonsillitis and sinusitis, while Bloodgood states that in 50% of the toxic goiter cases he has found either infected tonsils or an infected nasal cavity. If it can be definitely proven that goiter and hyperthyroidism are due to an infection, then the relationship between the thyroid gland and focal infection is very intimate, and *a priori* the removal of the focal infection ought to result in improvement or cure. Clinical experience, however, teaches us not to rely too much upon these measures as curative. This in itself raises considerable doubt as to the focal infection being the specific cause rather than a coincident infection, which, however, merits early and urgent eradication. The intimate relationship between the faucial tonsils and the cervical lymphatic glands in tuberculous glands of the neck is clinically very important, so that it is now universally recognized that removal of the diseased glands is not sufficient, without the removal of the source of infection, which may be primary in the tonsil or through infection via the tonsils. The presence of a cervical adenitis of any kind demands a thorough investigation be made of the source of the trouble, frequently in the tonsils and teeth. Where there has been no history of acute tonsillitis, and there is no apparent evidence of chronic tonsillar infection, but there is present a serious systemic infection, tonsillectomy is to be considered only when there is no other demonstrable focus of infection. The general rule, however, holds good that where the tonsils are the foci of infection, causing systemic disease, there is nearly always a history of acute tonsillitis or evidences of chronic tonsillar infection. Daland²³ states that if, after careful and minute examination of all regions of the body for focal infection, none is found, remove the tonsils in young adults for arthritis. In the chronic infectious arthritides, where the joints have been sensitized by the primary focal infection, it takes but a slight recurrence of the infection to cause a recurrence of the arthritis, and it is therefore essential for

complete therapeutic success than any associated infection should be eliminated. As chronic infection of the tonsils may be secondary to oral sepsis, sinus disease and chronic running ear, hence these should be cleaned up before removing the tonsils. Our attitude on the surgical removal of focal infection may be summed up in the observation of Moorhead,³ which applies to the tonsils as well as to the teeth, when he says, "No doubt teeth are being extracted which do not bear causal relationship to the general infection, but it is the lesser of two evils, and whether the patient is well or ill, it is never justifiable to allow any infection to remain anywhere in the body, which may be removed." The treatment of sinusitis comprehends the establishment of adequate drainage and ventilation of the sinus in question by non-operative methods if possible (topical application, irrigation and suction), and if this is unsuccessful, followed by operative methods.

The improvement noticed following drainage is not so apparent as where the focus of infection can be immediately and completely eradicated (abscessed teeth or diseased tonsils). A chronic suppurative otitis media, even with the best of treatment and the most radical operation, will not always be permanently cured. Dental foci should be thoroughly eradicated. Teeth involved either with pyorrhea or chronic alveolar abscess are not in the large percentage of cases successfully treated and, therefore, the safest procedure is extraction. I wish also to emphasize the importance of the eradication of focal infection in the syphilitic and tuberculous. It is really surprising what good therapeutic results one obtains in the vigorous treatment of these cases from every possible etiologic angle. All the causative factors in the case must be thoroughly investigated and the necessary treatment instituted to obtain the quickest and best results. If, after cleaning up the apparent foci of infection, no improvement results, it means that there is still present some undiscovered focus of infection somewhere in the body, or that the etiological diagnosis of focal infection is not substantiated. While it is necessary to eliminate all possible foci of infection anywhere in the body before it can be positively asserted that focal infection is not an etiological factor, it does not necessarily follow that because a focus of infection is found, it

must have a direct causal relationship to the disease which is under investigation, unless the focus has been removed and improvement or cure result. In this connection I may state that it is a well known clinical fact that many cases recover without the removal of the apparent source of focal infection, but this occurs, however, only after prolonged treatment, and these cases are especially prone to relapse and recur, thereby jeopardizing the health and future welfare of the patient. It cannot be too strongly emphasized that there is never any justification for permitting the continued presence of any recognizable focus of infection, which may immediately or subsequently have a direct etiologic relationship to some serious disease and thereby compromise the individual's health or even life itself.

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PULMONARY INFECTION BY SPOROTHRIX OF SCHENK*

FLORIMOND LE BLANC, M. D.

DE KALB, ILL.

The Sporothrix of Schenk was first recognized by Schenk, Hektoen and Perkins.

W. W. Hamburger of Chicago reported in the *Journal American Medical Association* in 1912 a summary of over 200 cases which have occurred in all parts of the world, especially in the middle western portions of the United States.

He reports that there is evidence that it is not merely a local skin affection, but may, like other granulomata, become a generalized systemic infection. The organism of Schenk has been found in muscles, joints, bones, kidneys, lungs and the blood by cultures. The disease is most conspicuous in agricultural districts, among farmers, also fruit dealers or handlers and berry pickers, and is the cause of many unhealed chronic ulcerative processes to which various names have been applied.

In the *International Clinics* of 1912, Hamburger gives Beurman's classification as follows:

1. Localized sporotrichosis with sporotrichotic chancre and lymphadenitis with ascending lymphangitis.
2. Disseminated gummatous sporotrichosis; multiple subcutaneous nodules without ulceration, at first hard, painless masses, later cold abscesses.
3. Disseminated ulcerative sporotrichosis; multiple polymorphic ulcerations.
4. Extracutaneous sporotrichosis; localized in bones, mucous membranes, muscles, joints, kidneys or lungs.

The clinical findings show an insidious onset and slow progress following the course of lymphatics small hard subcutaneous or submucous nodules with only slight pain, if any, and fever.

One is, therefore, liable to mistake the disease for tuberculosis or even syphilis.

Ralph Webster claims that attempts to obtain the sporothrix either in sections of the affected tissue or in smears from the broken down nodules, have usually failed. Cultural methods are, therefore, essential, and the organism grows best in 2 per cent. glucose agar. The organism readily stains with ordinary dyes and is gram-positive.

Without going into the details of the cultural media growth and appearance of the branching septate mycelium, I will draw your attention to the microscope which I have brought along so that you may see the characteristic pear-shaped spores which are 4 to 5 m. in length by 2 to 3 m. broad.

As a resume I will quote again from Hamburger's report in the *Journal A. M. A.*

"It would seem highly probable, therefore, that sporotrichosis is a widespread prevalent disease, particularly in the country and farming districts, and that many unhealed chronic ulcerative processes now passing under the caption tuberculosis, syphilis, glanders, blastomycosis, actinomycosis, etc., are in fact unrecognized sporotrichosis. In the belief that with greater familiarity with the clinical picture will come earlier and more general recognition of the disease, I present this paper, for it is my conviction that the history of the development of sporotrichosis will parallel that of actinomycosis and blastomycosis as soon as the attention of the profession, particularly those practicing in the farming districts, is directed to the infection."

As to treatment, the only one which so far has proved successful is K. I. in increasing doses up to 6 gm. per day or more—and it should be kept up at least a month after apparent recovery.

Two cases which I wish to report have been a puzzle to a few of us and it is only after four months of close watching that I was fortunate enough to discover in the sputum analysis a sporotrichosis granule bearing many spores. I do not claim that I recognized the peculiar pear-shaped organism at the time for I had never seen it previously, but I felt quite certain that at last I had found something pathognomonic, and I therefore sent immediately the contents to a reliable Chicago laboratory, which reported a very positive case of sporotrichosis and also remarked that those organisms were very numerous.

In examining the patient's throat, I had been impressed by a yellowish, firm, submucous granuloma, the size of a split pea, and after endeavoring to puncture it and evacuate what I thought might be pus, I found that it was rather firm in texture, and referred the case to Dr. Clifford Smith, who reported that he also had found the same little growth at the base of the tonsil in the patient's sister's throat; he afterwards removed both nodules similar in appearance in each of the two patients, but I have been

*Read at the meeting of De Kalb County Medical Society, October 27, 1920.

unable to recover either the mycelia or the sporothrix proper in the ablated sections. The microscope revealed only lymphoid cells and practically an aseptic focus—which verifies Ralph Webster's assertion of the difficulty of recovering the organism in the focus itself.

Although the patients have been thought tubercular for the last five years, I was somewhat reluctant to base such diagnosis on the clinical findings. I will not discuss my private opinion on the outlook and somewhat characteristic findings of the chronic tubercular, as it would take me out of my subject, but I will say that the characteristic properties of the urine for tuberculosis as well as the blood pressure picture did not impress me as a correct diagnosis for tuberculosis in either case. The systolic pressures in both cases were 130 and 135 respectively, mean pressure above 100 in both; pulse pressure above 50 and energy index above 18,000, also in both.

Those are features I repeat, which I do not find characteristic in tuberculosis, although both patients have lost weight, feel exhausted, have evening temperature, cough, etc. The Von Pirquet and tubercular bacilli were never found positive in either case, and I therefore feel safe in reporting them as two cases of pulmonary sporotrichosis.

A CASE OF "ARGYRIA"*

CLIFFORD E. SMITH, M. D.

DE KALB, ILLINOIS

Patient, U. G. K., aged 55 years. Mother was Pennsylvania Dutch and father was English and Irish.

Occupation, traveling salesman.

History: Catarrh of nose since 1910 which made him weak, anemic and affected his stomach. Consulted various doctors to get relief, undergoing operation for appendicitis, and in 1916 Dr. Clifton of Watseka, Ill., gave him silver nitrate in quarter grain doses to be taken three times daily. Treatment was continued for three months when it was noted that the skin of the face and hands—the exposed surfaces—was assuming a darker color. January 16, 1919, referred to me by Dr. Blagden of Sycamore, Ill., on account of the persistent so-called "catarrh."

Findings: A muco-purulent discharge from

middle meatus of left nostril. Bones of face so heavy that all sinuses are equally dark to transillumination. X-ray findings are also negative. Puncture of left maxillary sinus with trocar and cannula, followed by irrigation, gave over an ounce of thick creamy pus, which smelled like a rotten egg. January 27, 1919, left inferior turbinate trimmed and large hole made into left maxillary sinus by means of a Tilley burr.

April 1, 1919, patient feels much better and all odor from left nostril is gone.

This case is presented to show (fortunately) a rare pigmentation of the exposed surfaces of the skin and also as a warning that silver nitrate should be given internally very cautiously.

His trouble in the beginning was undoubtedly a focal infection in the maxillary sinus, and this is what should have been treated.

THE SIGNIFICANCE OF CARDIAC MURMURS.*

C. J. McMULLEN, M. D.,

CHICAGO

In the past much stress has been placed upon the importance of cardiac murmurs. At the present time more attention is being paid to other factors which determine cardiac compensation or insufficiency. However, murmurs cannot be entirely neglected, for their presence or absence form an important element in cardiac diagnosis and prognosis.

The subject matter of this paper is based upon conclusions derived from observations made in the cardio-vascular section of the medical department of the army. The physical examination of the men in the army afforded an opportunity to examine the hearts of a large number of young adults. The relative frequency of functional murmurs in otherwise normal hearts was demonstrated. Conclusions were reached regarding the importance of the various murmurs heard in young adults. The importance of certain features of cardiac diagnosis was emphasized by this work.

The subject matter is best considered under five different topics: First, the method of examination; second, a consideration of functional murmurs; third, the importance of diastolic

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murmurs; fourth, presystolic murmurs, and, fifth, cardiac irregularities.

Risking the criticism of discussing too elementary a subject, I am going to consider two practical points about the method of conducting the physical examination which, although very simple, were of great value in the army work. The first is the type of stethoscope used and the method of using it, and second, the method of percussion.

The ordinary small belled Ford stethoscope was found to be the most practical. In examination at the apex this type of stethoscope is indispensable. The value of this stethoscope lies in the fact that the bell of the scope is small, and can be pressed up between the ribs against the intercostal muscles. There is a striking difference between the sounds heard at the apex when the stethoscope is pressed lightly against the skin and those heard when it is pressed up in the interspace. There are vibrations produced by the tissues between the apex of the heart and the stethoscope which cause many abnormal sounds and rumbles. These sounds are entirely overcome by pushing the bell of the scope up against the deeper tissues. This is of special importance when tachycardia is present, as it so frequently is at the time of examination, due to the nervousness of the patient. When the heart is rapid, with the stethoscope resting lightly against the skin, these abnormal sounds at the apex simulate mitral valve disease. This simple point of technique in the proper use of the stethoscope was found to be of great importance in examining recruits, the majority of whom were nervous and frequently had a pulse rate of one hundred and twenty or more. Many a doubtful valvular lesion disappeared with a little more pressure on the stethoscope.

The second point is the method of percussion. The area of cardiac dullness, as determined by percussion, is the best clinical method we have, outside of the x-ray, in determining the size of the heart. Of course, any method of percussing cardiac dullness is not absolutely accurate. This has been proven by comparison with x-ray findings. We cannot, however, x-ray every patient that we examine, and although not absolutely accurate, we must rely upon percussion for this information.

This task is much simplified by the use of the

direct method of percussion. This method is used in the following manner: Standing in front of the patient, draw the soft tissues over the precordium up towards the axilla with the left hand. Then, using the middle finger of the right hand as the percussing finger, percuss the chest wall, following down in the fourth, fifth and sixth interspaces, from the axilla toward the heart until the area of cardiac dullness is heard and felt. It is necessary to percuss in the interspace, to avoid the resonant note produced when percussing along the ribs. The change in resistance is easily felt as soon as the heart is reached. The sensation of increased resistance due to a solid organ is very definitely noted, and even more noticeable than the change in resonance. This method of percussion is especially valuable at the base in determining the increase in the size of the aorta or the presence of aneurism.

The presence or absence of cardiac enlargement is of great importance in judging the significance of cardiac murmurs and in estimating the prognosis. The results obtained by this technique are accurate, it is easier than the indirect method and deserves more general use. In large emphysematous chests any method of percussing cardiac dullness may be erroneous and the x-ray should be used to corroborate the findings.

Functional murmurs. Changes in the structure of the heart valves are the usual cause of heart murmurs. There are, however, murmurs heard over the heart which are not associated with any valvular lesion. These are called functional murmurs. The exact cause of functional murmurs is not known. There are various theories as to their origin, but at present their exact etiology is a mystery. They are very common in young adults. Their great frequency in the men examined for army service made their recognition and proper diagnosis of great importance to the Surgeon General. Probably ten per cent. of the men examined in the service had functional heart murmurs, which could easily be mistaken for organic lesions. Functional murmurs are most commonly heard over the base of the heart in the second left interspace, and have the following characteristics: They are systolic in time. Their intensity is variable. Although usually soft, they may be very harsh and are sometimes accompanied by a palpable thrill. If very loud, they may be heard over most of the

precordium and may even be heard at the apex and up in the vessels of the neck. Their intensity is increased by complete expiration, when they are often very harsh. They are louder when the heart is rapid, as after exercise, and softer, or sometimes absent, after rest. They are not associated with any enlargement of the heart.

Functional murmurs at the apex are less common than those at the base. They are short blows, not entirely replacing the first sound, are not transmitted, and are not associated with any cardiac enlargement. Functional murmurs at the apex are very common in rapid hearts, and when due to the rapidity usually disappear after rest. Frequently during the course of acute febrile conditions with increased heart rate, a short systolic murmur is heard at the apex, which disappears with the cessation of the fever. These apical functional murmurs are very variable, heard one day and absent the next.

It is always advisable to inquire into the history as to a recent attack of acute rheumatic fever, chorea, or sore throat, for a beginning lesion of the mitral valve in which the heart has not yet hypertrophied may cause a systolic murmur with no increase in the cardiac dullness. With such a positive history of a recent infection, we should hesitate before diagnosing an apical systolic murmur as functional, even though there is no cardiac enlargement.

The loud systolic functional murmurs at the base may be mistaken for aortic stenosis. If we will remember the principles laid down to Laube regarding the diagnosis of aortic stenosis, the two can be readily distinguished. Leube states that aortic stenosis is accompanied by a palpable thrill, absence of the second aortic sound, loud transmission of the systolic murmur up the vessels of the neck, a characteristic pulse, the so-called *pulsus tardus and rotundus*, and cardiac enlargement. The murmur is heard best in the aortic area.

The systolic functional murmurs at the apex must be differentiated from the murmur of mitral insufficiency. In mitral insufficiency the heart is always enlarged, the murmur partially or completely replaces the first sound, is well transmitted to the axilla, and often heard in the back. The second pulmonic sound is accentuated.

Great mental distress is caused by diagnosing these functional murmurs as organic, and burdening the patient with the idea that he is suffering from incurable heart disease.

Lewis, and his associates, carefully studied the subject of systolic murmurs in their work in the British Army. They concluded that systolic murmurs not associated with definite cardiac enlargement were of little practical importance. This same conclusion was reached in our army and unless the men had definite enlargement or showed signs of myocardial weakness, they were accepted for full duty, regardless of the systolic murmurs. The same principle applies to our civil practice. In fact, it is more important, for we all know how often patients are made invalids by worrying over the thought that they have serious heart trouble. Frequently is is one of these systolic murmurs without cardiac enlargement, and it is our duty to protect the patient by assuring him of the insignificance of these murmurs. Especially is this true of systolic murmurs in the pulmonary area.

Diastolic murmurs. It is impossible to lay too much stress upon the importance of diastolic murmurs. Their presence always means organic heart disease. I say always, for ninety-eight per cent. of diastolic murmurs are organic. Rarely a cardio-respiratory murmur may be diastolic, but these are variable, present one day and absent the next. Diastolic murmurs are constant and do not change from day to day. It is the diastolic murmur which requires emphasis as to its import. It is the murmur which justifies impressing the patient with the fact that he has heart trouble. Because of their importance as evidence of grave heart disease, and because they are frequently faint and difficult to detect, great care was taken in the army work not to overlook diastolic murmurs.

The early diastolic murmur is heard best over the base of the heart in the second right interspace and along the left border of the sternum. It may, however, be heard over any portion of the precordium, and is sometimes heard best at the apex. The diastolic murmur over the base, practically speaking, means one of two lesions, aortic insufficiency or pulmonary insufficiency. Pulmonary insufficiency needs scarcely be considered. It is very rare, usually a congenital

lesion with an associated septal defect, and accompanied by all the typical peripheral findings of congenital heart disease, such as cyanosis and club fingers. So, in the absence of the signs of congenital heart disease, we may consider all early diastolic murmurs as due to aortic insufficiency.

Diastolic murmurs have the following characteristics: The murmur has a typical exhaust blowing sound. It is constant, the same every day. It is associated always with cardiac enlargement. When the early diastolic murmur is very faint and the heart beating rapidly, it may be overlooked. It is best always to have the patient rest for a short time to slow the rate. Then with the patient lying flat on his back at the end of complete expiration, with the chest flattened as much as possible, the murmur is more audible. Often it can be heard better with the naked ear against the chest wall. This is one place in which the flat-bellied Bowles stethoscope is of value. It is not necessary to insert the scope beneath the ribs, and the large flat bell may be placed over the sternum. The murmur is intensified and faint murmurs more easily heard.

Presystolic murmurs. The murmur of mitral stenosis, the typical presystolic murmur, is always associated with, and immediately precedes, a loud snapping first sound. It is this loud snapping first sound which attracts the attention of the examiner to the fact that the patient may have a possible mitral stenosis. In normal hearts beating rapidly, the first sound becomes very snappy and is apt to be mistaken for the loud first sound of mitral stenosis. This was a very common error in the early heart work in the army. To exclude this cause of the loud first sound the patient should rest for a short time to slow the rate of the heart. The murmur is more of a rumble and very definitely crescendo in character, becoming louder as it approaches the first sound, and ending abruptly with the loud snappy first sound.

Often the presystolic murmur of mitral stenosis is not very audible with the patient in the upright position. There are several ways of increasing the intensity of the murmur. The method most commonly used in our work and found to be the most satisfactory was that of changing the patient's position: He was re-

quested to lie on his left side with his chest protruding over the edge of the examining table. This allowed the apex to drop against the chest wall. Then by pressing the bell of the stethoscope deeply into the interspace against the apex, to overcome any adventitious sounds, the presystolic murmur is very definitely heard as a loud rumble increasing in intensity, and ending with the loud first sound. Another method of accentuating the presystolic murmur is the use of amyl nitrite. After a few whiffs of amyl nitrite this murmur becomes much more audible.

A presystolic rumble may occur in enlarged hearts or with aortic insufficiency. This murmur is spoken of as the Flint murmur, and is distinguished from the murmur of mitral stenosis by the absence of the snappy first sound.

Cardiac Irregularities. The most common irregularity encountered was the extra systole. It was quite common. When only occasional they were considered of no importance, but when very frequent, were considered as evidence of myocardial trouble. We were quite surprised to find that many of these hearts, with very frequent extra systoles, cleared up entirely by the removal of foci of infection, especially infected tooth roots. Many very irregular hearts which simulated auricular fibrillation cleared up entirely after extracting several teeth whose roots were the seat of infection.

Summarizing, there are five important conclusions which the army work confirmed and the importance of which it emphasized. First, systolic murmurs, unless accompanied by definite cardiac hypertrophy, are of little practical importance and we should avoid alarming the patient by telling him that he is suffering from serious heart disease. Second, functional murmurs are very common. Third, diastolic murmurs, practically speaking, are always organic. They are often faint and easily overlooked, and frequently not associated with the typical peripheral signs of aortic insufficiency. Fourth, the degree of cardiac enlargement is a very important factor in determining the significance of cardiac murmurs. The direct method of percussion is a great aid in percussing out cardiac dullness, and should be more generally used. Fifth, extra systoles often disappear after the removal of foci of infection.

OBSERVATION IN SPHENOID SINUSES*

JOHN A. CAVANAUGH, M. D.,

CHICAGO

For some time I have been interested in knowing the role played by the sphenoid sinus. Many conditions which seem vague and not to be accounted for can be illuminated by careful study of these cells. Doctors Sluder, Loeb, Onoidi and others have done much to clear up some of the dark corners, but there is still much to be learned.

When we consider the association of the dura, large blood vessels and nerves, especially the optic and the fifth which are so closely related by nerve communication, we must realize the many symptoms which are liable to arise from this deep-seated cavity; transferred and referred impulses of these nerves are clearly outlined by J. Parsons Schaeffer in his book, "On the Nose and Olfactory Organ."

It is not easy to diagnose sphenoid affections, especially the non-suppurative type; it requires very careful and painstaking examination to determine its involvement.

I remember hearing Dr. Otto Stein of Chicago say that symptoms referred to the orbit and cranial cavity, which arise from sphenoid sinus disease, often show no manifestation in the nose, but when the sphenoid is opened it is surprising how the symptoms sometimes disappear. I believe, however, pathology can be demonstrated in these cases if we but search for it.

It is not always possible to make a diagnosis at the first examination and many of us make mistakes. In my opinion the pharyngoscope is a necessity for making a thorough examination of this obscure area.

I am firmly convinced that many obscure eye symptoms can be traced to pathology in these cavities. I have examined many eye cases for Dr. D. C. Orcutt of Chicago, in which the diseased conditions have improved or disappeared after treating of this sinus.

Being interested in knowing just what role, if any, micro-organisms might play in this cavity, I have made cultures from the sphenoid of many cases, whether the sinus was suspected or not. The method of securing the culture was as follows: Cocaine was applied to give better access to the ostea, the surface cleaned with a weak iodine solution, 1 per cent silver nitrate applied

around sphenoid area, then compound tincture of benzoine at area of the ostea. A silver canula with tapering end was introduced into the cavity through the ostea. A Holmes eustachian applicator with sterile cotton wrapped around its end was passed through the canula into the cavity and swabbed around, then applied to the culture media. In one of Dr. Orcutt's cases, after dilating the ostea the patient remarked that his vision was improved. I noticed also that it was only in cases where cultures were obtained that improvement was evident. Where the culture was negative there was no improvement; whether this will always be true I cannot say, as the number of cases with negative cultures were few. Cultures taken from fifty sphenoids were made; of this number, thirty-four showed staphylococci, six micrococcus catarrhalis, three staphylococcus and diphtheroid bacillus and six negative cultures. In one case, where I enlarged the sphenoid opening for aeration and drainage I secured a saphylococcus growth; about six weeks later, when opening the other side, I found another staphylococcus infection, and a negative growth on the side previously operated on.

Local areas can be affected without the entire mucous membrane of the cavity partaking in the process. The smaller the involvement the slighter the symptoms and vice versa.

I am making it a routine practice, where obscure symptoms are present, and a sphenoid sinus is suspected, of making a culture, and if bacteria are found, of enlarging the ostea. I speak now only of the insidious type, not of the suppurative. I wish here to express my thanks and appreciation to Miss Sarah Stokes, the bacteriologist at Henrotin Hospital of Chicago, for her painstaking examination of many of the cultures.

It occurred to me that there should be some way to get the anatomical position and relation of the sphenoid cavity to the surrounding areas, which are usually indefinite in the radiograms of the living subject, I dilate the ostea of these sinuses and inject barium suspended in buttermilk, which flows readily, and can be easily washed from the cavity. After filling the sinus with this mixture I mop away any solution outside the cavity, and introduce a piece of cotton to prevent the liquid from flowing out; radiograms are then taken. This gives a clear and definite knowledge of the size, shape and relation of the sinus to the surrounding parts.

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I believe the postero-anterior stereo gives better detail and a better idea of the relation of the sinus to neighboring structures. I do not advocate this as a diagnostic measure, but in cases where symptoms are obscure, and we suspect the sinus of being in close relation to surrounding structures, this procedure may be of value.

I have had a number of patients from Dr. D. C. Orcutt for sinus examinations because of obscure eye findings and have had some very excellent results; I hope to report on these cases later.

By certain intranasal markings I believe it possible to get a definite idea of nerve relations to the sphenoid sinus. I am indebted to Dr. Maximilian Hubeny of Chicago for his assistance and for his kindness in taking many of these radiograms.

DISCUSSION.

(Abstract)

Dr. J. C. Beck (Chicago): Said that to his knowledge this is the first attempt made to use the method of diagnosis from the analogue of it in the pelvis of the kidney. In his own work injecting the sinuses with the solutions, he found that there are some portions of the sinus that were apparently not reached. But he had filled sphenoid sinuses in the skull completely with bismuth and vaseline injections, because that is more of a semi-solid substance.

He doubted the statement that the sphenoid sinus was ever free from germs, though the condition is improved by opening, as has been the experience of many men.

Dr. Hayden (Chicago): Thought that the same thing might be very well done in many of the antrum cases, especially those into which it is impossible to introduce a probe through the normal opening.

The solution that Dr. Cavanaugh uses can be readily washed out, and the advantage in using that in antrum cases would be to more clearly outline the extent of the sinus.

Many of the pictures of antra, especially those that are diseased, show a very indistinct outline on the x-ray. This method would show their outline very distinctly. It would also show the presence of polypi by exclusion. That is to say, if a polypus were located at a given point on the antral wall, the opaque substance would go as far as that polypus and then leave a space between the extent of the opaque substance and the antral wall, which we could surmise was a polypus formation or some sort of a tumor mass.

Dr. Tydings (Chicago): Referred to the question of malformations. In one case in which a man had injected one side. It went entirely behind the sinus on the other side, so that you could not possibly have reached that sinus in its entirety at its lowest point without going through the wall behind the sinus on the other side.

In another case there was only one single cavity and two openings.

Dr. Cavanaugh: I was glad to hear Dr. Beck's remarks. The method of filling the cavities is not difficult. The patient lies down while the cavity is being filled, and the solution being thin, will flow into the minutest corners. This mixture is injected until it flows from the ostea around the canula; then the overflow is wiped away, and a piece of cotton placed at the ostea to prevent the solution from flowing out. I can readily see, why the bismuth with vaseline, which Dr. Beck mentions, would be unsuccessful in this work as it would have to be injected under considerable pressure to find its way to many obscure areas, a procedure which I would dislike.

Radiograms of this cavity have been unsatisfactory, and even the anatomical relations were very indefinite. Pictures taken after injection were much more definite than those taken before and it was surprising the amount of information obtained. I believe there is much to be learned from this procedure.

As regarding the cultures from these cavities, I have no definite claims to make; only that six out of fifty cases were sterile, regardless of Dr. Beck's claim that they are all infected.

Dr. Pierce (Chicago) suggested that it is not necessary to really fill a cavity of this sort with any substance in order to get these results. If we can cause this to adhere to the walls completely, we will get a satisfactory result. Therefore, I would suggest that in doing this, you first dry the cavity by hot air, which is probably possible. Then spray or introduce in some way a substance that will make this barium adhere to the surfaces. Then introduce the barium in a mixture that will make it possible to adhere to this gluey substance, whatever it may be, and in that way you can secure probably a complete outline of the cavity.

Dr. Cavanaugh: The suggestion by Dr. Pierce might be a good one, but it seems to me it would be difficult to dry out many of the irregular cavities that we find and introduce this fixative coating to which the barium would adhere. However, it may be an excellent idea.

ABSCESS OF THE TONGUE*

J. C. DALLENBACH, A. B., M. D.

CHAMPAIGN, ILL.

The stratified epithelium which covers the tongue has characteristics in common with the skin on the one hand and with mucous membrane on the other. It is not derived from the original epiderm but by transition from the endoderm. The mucous membrane covering the under surface of the tongue is identical in structure with that lining the rest of the oval cavity. Over the anterior two-thirds of the dorsum of the tongue

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it is covered with filiform and fungiform papillae giving the characteristic roughness of that organ. At the back near the base is the circumvallate papillae of large size from eight to ten in number and formed in an inverted V. The mucous membrane behind the circumvallate papillae is smooth with simple mucous glands. Between the circumvallate papillae and the epiglottis is a collection of lymphoid tissue similar in structure to the tonsils.

It is difficult to account for the fact that the tongue situated so much more exposed than the tonsils and subject to frequent injury by the teeth and by food introduced in the mouth, is so rarely the seat of inflammation. It is difficult or indeed impossible in the tongue to distinguish between fluctuation and elastic swelling and the existence of an abscess may remain uncertain until it is punctured or incised.

Although cases of inflammation or abscess of the tongue are infrequent, the causes and conditions leading up to them are varied and the types are many.

Foreign bodies may remain imbedded a long while in the tongue and not be suspected. Inflammation may be excited by the presence of a foreign body and a hard circumscribed indolent tumor formed. This is sometimes followed by suppuration with the formation of a sinus and the discharge of the foreign body spontaneously, but more commonly the foreign body remains buried in an indolent inflammatory tumor. A foreign body is to be suspected if a wound, especially a puncture wound, does not heal readily, but examination by a probe or even an exploratory incision may be necessary to make the diagnosis.

The extraction of a foreign body should never be undertaken except after due preparation for possible hemorrhage, the patient anesthetized in a good light, the mouth well open and a thread passed through the tongue and assistance at hand.

Acute parenchymatous glossitis in some instances appears to be the result of direct exposure to cold air with the mouth wide open. Among predisposing causes are injuries especially by carious teeth. The onset is sudden, the tongue swelling to two or three times the natural size in twelve to twenty-four hours. There is considerable pain, the tongue is tender, and the dorsum covered by a thick opaque white fur.

Saliva is profuse. Dysphagia is invariably present and dyspnea not uncommon.

This condition is not commonly followed by suppuration, but when it does occur it is in most cases limited in extent.

The treatment of acute parenchymatous glossitis is purgation, liquid diet, ice to the tongue and in the more severe cases incision making two cuts about two inches long, one-third of an inch deep, and two-thirds of an inch on each side of the mid-line. If not carried too deep, the hemorrhage is not severe.

When the causative agent is the Staphylococci, we have a condition known as Staphylococcal glossitis or acute abscess of the tongue, which is characterized by an elongated, hard, resistant swelling, which increases in size without any marked extension of inflammation. When situated on the dorsum of the tongue, it may show evident fluctuation. Such a swelling is likely to form as the result of a bite or sting of some insect, or injury from a pipe-stem or other object held in the mouth. It may be caused by a kick or blow under the chin. It is acutely painful, but the patient can swallow, and although he may show some difficulty in breathing, the condition is not dangerous to life.

Puncture or small incision should be made early under cocaine for even if pus is not found, the tension will be relieved and further suppuration limited.

It is probably only when there is a mixed infection with streptococci that there is extension to the neck with the formation of deep multilocular abscesses.

Streptococcal glossitis is marked clinically by a large amount of local edema and by danger of extension to the neck, glottis, lungs and pericardium. Extension in the neck is called Ludwig's angina. It commonly starts by an acute edematous swelling about the geniohyoglossi and the mylohyoid muscles and about the sublingual glands and Wharton's duct. An acute edematous, brawny, swelling forms in the neck, which, if the patient survives, tends to break down into multilocular abscesses.

In acute superficial glossitis, or hemiglossitis, which is rarer than acute parenchymatous glossitis, the inflammation is limited to one-half of the tongue and is more benign. In most cases the left half only is affected. It is characterized by a definite nodule or lump in the inflamed

part deep in the substance of the tongue or raised on the dorsum, accompanied by general malaise, fever, pains in the side of the head and face and no dyspnea. The swelling usually subsides in three to six days.

Tubercular infection or tuberculoma are commonly seen on the side or tip of the tongue. It is exceptional for them to pass the size of a bean or small nut without breaking down.

Actinomycosis of the tongue is a very rare condition and nearly always originates by lodgment of a fragment of dried grain or piece of the husk or awn belonging to wheat, barley, oats or some grasses with which the fungus is carried in. It causes a small tumor from the size of a pea to an egg which slowly increases in size, and only late breaks down into an abscess, which ruptures, leaving a foul fissure or ulcer. The tumor is first superficial and later extends deep into the tongue.

Cancer of the tongue is always of one variety, epithelioma. It commences as a small nodule or ulcer usually on the side of the tongue.

Gumma of the tongue may be superficial or deep. They do not usually occur until four or five years after the primary sore. The superficial ones are the size of a pin head to a pea and are situated most frequently on the dorsum. The deep or parenchymatous gumma varies from quite small to the size of a walnut, and although they may occur in any part of the musculature of the tongue, are more frequently situated on the border or near the middle of the dorsal aspect. They are very indolent, produce little or no spontaneous pain, and are not usually tender. The mucous membrane covering them is unchanged. Chronic abscesses are usually more clearly defined than gumma and have a more distinctly rounded shape.

Dermoid cysts are situated in the mid-line beneath the main substance of the tongue and bulge beneath the chin. They may be the size of an egg or even the fist. In the mouth, they have a yellowish look as distinguished from the bluish look of ranula.

Follicular abscess of the lingual tonsil or lingual quinsy has the general symptoms of an ordinary acute tonsillitis without swelling of the faucial tonsils or pillars. It requires lancing.

In smallpox, typhoid fever, malaria, etc., there may develop in the tongue an acute local glos-

sitis which at times ends in gangrene and sloughing.

Chronic abscess of the tongue is due to a slight injury. It commences insidiously and seldom is there a history of inflammation preceding the appearance of the tumor. It may exist for years without even reaching the size of an ordinary nut. The tumor is perfectly circumscribed, lies beneath the mucous membrane, which may be perfectly movable over it. Fluctuation is perceptible if the pus is not too tightly packed, and the little tumor is not usually painful or tender. Abscesses are commonly situated in the dorsum of the tongue in front of the circumvallate papillae which distinguishes them from mucous cysts which are always found behind the circumvallate papillae.

Chronic abscesses should always be suspected where there exists in the substance of the dorsal aspect of the tongue, a small circumscribed, smooth tumor of round or ovoid shape, of long standing, not very prominent, not translucent, and not painful or tender. Diagnosis may be confirmed by incision, and free incision with scraping generally serves for the cure of the disease. If the cavity fills again, owing to thick walls, excision will be necessary.

I wish to report the following case:

H. C. R. came to see me at my office on February 6, 1920, complaining of swelling of the tongue and pain on swallowing.

He gave the following history: Teamster. Does not smoke but chews tobacco. No history or injury to the tongue. Denies syphilitic infection. About three days ago first noticed a slight swelling of the tongue, which has increased since. Now some difficulty and pain on swallowing. No difficulty in breathing.

Examination. Well nourished man, no systemic signs of syphilis or tuberculosis. In the mid-line of the tongue in front of the circumvallate papillae is a mass the size and shape of a pecan, hard and not very tender. The mucous membrane covering the swelling is normal. Anterior cervicle lymph nodes slightly swollen and tender.

He was given a mouth wash to be used hot and a course of calomel followed by Epsom salts and asked to report the next day. This he failed to do, but two days later I saw him, at which time the mass had enlarged, the lymph glands increased in size and the patient was in considerable pain. At this time I thought I could detect fluctuation and advised incision. This the patient refused and sought advice elsewhere. He was treated expectantly and during the next few days the tongue increased to about three times its normal size, protruding from the mouth. Swelling

of the neck increased and pain was so severe it had to be controlled by hypnotics. Dysphagia was marked but at no time was dyspnea present. One week from the time I last saw him the abscess ruptured spontaneously, giving immediate relief. Within 48 hours the tongue was practically normal size and within a week the swelling in the lymph glands had subsided.

BRONCHO - PNEUMONIA WITH SOME COMPLICATIONS*

G. W. RICE, M. D.

GALENA, ILLINOIS

It is with some degree of diffidence that I bring before you the subject of broncho-pneumonia, so much having been written thereon since the influenza epidemic of 1918, but having had during the past year a few cases that were to me at least of more than ordinary interest, prompts me to do so.

It is particularly the primary form in children about which I wish to speak. I will therefore pass without mention the secondary form following the acute infections, recognizing, however, that a mild bronchitis may insidiously develop into a broncho-pneumonia and thus be considered a primary infection.

Broncho-pneumonia in contra distinction to lobar pneumonia is not a self-limited disease. It has no fixed habitation in the lung. It migrates from focus to focus. It has no cycle. Its treatment demands a cure. The varying elements entering into a case subject the course of the disease to much variation.

The disease is primarily one of infancy. The tender age of the patient, the various infective micro-organisms, the amount of lung tissue involved, and the natural resistance of the patient are elements that vary in every case. Therefore, the course of the disease is subject to no definite cycle.

Undoubtedly these varying elements entering into and developing the symptomology of broncho-pneumonia render the diagnosis in some cases difficult, and account for the different diagnoses sometimes made. As in a case I wish to report in which the following diagnoses were severally made by a number of competent men—gastro-enteritis, pericarditis, broncho-pneumonia, intestinal obstruction and meningitis.

It is not my intention to discuss the etiology and pathology of broncho-pneumonia, nor all the complications that may develop, but, particularly, by reference to two cases point out the similarity of the gastro-intestinal complications that may arise to those of post-operative paresis of the intestines or ileus paralyticus.

Dr. P. Lockart Mummery of London, quoted by Guthrie, states that outside of infection ileus is the most dangerous, most fatal complication which follows laparotomy. Crandon and Ehrenfried state: "Acute intestinal obstruction is one of the most disastrous sequelae which the abdominal surgeon has to face and that this is most frequently due to paralytic distention." Warbasse states: "Paralytic ileus is one of the most distressing conditions the surgeon is called on to treat, and says it is due: 1. To infiltration of the wall of the intestine with leucocytes, serum, and other products of inflammation. 2. To the effects of intra-intestinal and extra-intestinal toxins upon the motor nerves, and 3, to traumatism to the intestines, peritoneum, and the abdominal nerves."

Briefly stated we have in ileus paralyticus following abdominal section, distention, pain, nausea, followed in some cases with black copious vomitus, pinched facial expression, increased pulse rate, and labored breathing. A picture once seen will not be forgotten.

I wish to state that an identical condition can and does develop in some cases of severe pneumonic infections.

The etiology of the gastro-intestinal complications found in some cases of broncho-pneumonia can be attributed to the profound intoxication, either extra-intestinal or intra-intestinal, which exerts an inhibitory influence on the nerve energy distributed to the splanchnic and pneumogastric areas.

In such conditions we find beginning abdominal distention, increase in pulse rate, more rapid breathing, nausea which may increase in severity until vomiting occurs. The vomitus at first consisting of mucus and stomach contents later changing to black color and increasing in quantity. A rapid decline in the strength of the patient and death following. A typical picture of intestinal paresis extending to paralytic ileus.

Case 1. A normal, very bright child, three years old, with the best of home surroundings and care, developed an attack of pneumonia the diagnosis of

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which was confirmed by definite physical signs and consultation. The third day of the disease abdominal distention developed. He complained of pain in the abdomen. There was increase in temperature, pulse rate and respiration. Nausea developed within a few hours followed by vomiting, first of mucus and stomach contents, later by a black copious material. Facial expression pinched and sunken eye balls; rapid decline and death followed within twenty-four hours. A perfect picture of paralytic ileus.

Case 2. This case is interesting from the standpoint of the complications the number of consultants, and the various diagnoses made. H. F., age nine months. Son of a physician. He was a normal baby. Weighed seven and two-tenths pounds at birth. Was nursed until six months old, then placed on modified cow's milk and thrived. Was never sick.

About October 1, 1919, the father noticed that the child was irritable and refused to take his food as usual. At eleven P. M. he awakened crying and was in much distress. An enema was given by the father and the child went to sleep and slept until morning. The stool passed was greenish colored and the father diagnosed gastro-enteritis and gave an intestinal antiseptic.

The first few days the temperature was not taken. The child did not improve, but grew worse and the father making a more thorough examination found temperature 103, pulse 120 and respirations 30. Chest examination he reported negative and therefore he continued with intestinal treatment considering that the trouble was in the bowel.

Morning, noon and evening temperature the father stated varied the first week or ten days of the disease from 100 to 103.

The child continued to grow worse and on October 22 the father asked me to see the baby. I found what appeared to be a very sick child. Slight stupor, some cyanosis, temperature 106, pulse 150 and respirations 55. Physical examination showed a well nourished child. Over the left lung both in front and back were areas of mucous rales and bronchial breathing and weakened respirator murmur. Some dullness I thought over the middle portion of the lung. The lower portion of the right lung near the spine showed a similar condition only much more localized. There was marked tympanites and much abdominal distention although the child had had an enema and had passed some greenish stools during the preceding twenty-four hours.

Diagnosis broncho-pneumonia with intestinal paresis.

The father, not being quite satisfied with this diagnosis, was asked to call one of our colleagues, which was done; and this physician independently of either of us made the same diagnosis. Still failing to see the light as we attempted to illuminate the surroundings the father called an internist from Dubuque who, after a careful history taking and physical examination, diagnosed pericarditis. Then our co-worker, the father, was up in the air, and called in consultation

a former associate who from the history and physical findings made a diagnosis of broncho-pneumonia with intestinal complications.

Five days later, the child doing fairly well under the circumstances, but not making any great strides towards recovery, and still suffering from abdominal distention and continued signs of intestinal paresis, although we were getting flatus expelled quite copiously at times with a bowel movement or two every twenty-four hours, the father maintained the opinion that the little fellow had an obstruction in the small intestine, and that the bowel movement and flatus were only from the lower bowel, and that he should be operated on at once. Not agreeing with him in this but perfectly willing that he should call a surgeon of more experience than we from our country town. He called one from a well-known Chicago office requesting him to come prepared to operate for obstruction. He also called one from Freeport and one from Dubuque.

One of these eminent men diagnosed meningitis due to an infection from the accessory sinuses. One agreed with us who held to the diagnosis of broncho-pneumonia, with paresis, and the other was more or less non-committal, but all agreed that operation was not indicated.

We have in this case, including the father, eight consultants and five diagnoses as follows—gastro-enteritis, broncho-pneumonia, pericarditis, meningitis and obstruction of the bowels.

We found in this case that the distention could be ameliorated by the hypodermic use of salicylate of eserin and pituitrin repeated every four to six hours until flatus was expelled.

The more the distention the higher the temperature rose, the more restless the patient became, the breathing became more rapid and labored, and cyanosis developed.

The child coughed very little and this was misleading to one of the consultants.

The temperature was very remittent as will be found in cases of broncho-pneumonia. As an area of infection begins to resolve the temperature falls, and as the infective process extends to other regions it rises again.

The evening that the surgical consultation was held the child was very ill and the prognosis appeared grave. In fact, there was some slight evidence of a meningitis developing in the shape of a little rigidity of the muscles of the neck and a slight puffiness of the lids of one eye, which the nurse attributed to the child lying on the side.

The neck rigidity we who had been taking care of the patient attributed to the action of the pituitrin given.

The next morning the child was very much improved and went on to a rapid recovery.

Conclusions. In every case of pneumonia the abdomen should be watched as carefully as the chest. At the first indication of distention meas-

ures should be taken to ward off a possible approaching ileus.

Complications arising may mask the real condition and mislead the attending physician and consultants.

Paralytic ileus may follow severe pneumonic infections, in which it becomes as grave a complication as when following abdominal section.

THE SAVING OF THE FOOT FUNCTION BY SKIN GRAFTING*

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Evelyn A., aged 7 years, barefooted, mounted a bicycle behind another little girl, both sitting in the saddle. Her great toe caught in the pedal of the machine; her body astride the saddle acting as resistance, caused the member to be pulled off at the second joint. The skin on the dorsum of the foot stretched before it separated, and with the natural retraction after separation, the great metatarsal bone at its distal extremity was left exposed to the extent of two inches.

This occurred June 11, 1920. The problem was to save the bone in order to retain the function of the foot. The treatment consisted of bulky dressings composed of gauze and cotton, continuously saturated with a solution similar to the Ochsner "boric-alcohol solution." In due time all shreds of devitalized tissue sloughed off in the absence of any infection, leaving a beautiful granulating surface extending to the end of the bone but not covering it.

On June 25, the wound was covered with fragments of placental membrane, a few of which caused small islands of epithelium with great shrinkage of the surrounding granulations.

July 3, a general anesthetic was given and an Esmarch bandage applied from the foot to the thigh with a tourniquet above this. This left the limb bloodless on removing the bandage.

Skin grafting after the method of John Staige Davis of Johns Hopkins was resorted to; which consists of taking small deep grafts procured by inserting the point of a needle into the skin elevating a small fragment, tent-like, and severing with a sharp knife. These grafts were planted so closely that their edges touched. When cut, the

thin edge of the small graft curls under. Care must be taken to uncurl them and at the same time press the center, thereby causing a suction which causes them to adhere.

Scarcely an implanted graft failed to grow, giving the patient a firm, thick skin to the end of the bone; but the end of the bone was still bare, a surface the size of a dime or even greater. Massage loosened the new skin, which was daily stretched over the end of the bone as much as possible. The child stubbed the part causing it to bleed, which in turn caused an irritation, which was beneficial, as it caused granulation tissue, which seemed to be a hybrid between periosteal and muscular tissue. By not letting the inflammation subside, this granulation increased, and the skin crept gradually over the head of the bone. From pressure the spongy head absorbed sufficiently to let the artificial skin completely cover it.

HERNIA OF THE BLADDER—REPORT OF TWO CASES*

LEIGH F. WATSON, M. D.

CHICAGO

The first case of bladder hernia was reported by F. Plater of Basle in 1550, and the second case, by Jean Sala of Venice in 1620. In 1752, Verdier published the first important account of this condition which embraced the study of 20 cases, and contained a description of prevesical lipoma and the symptoms of vesical hernia much as we know them today.

On account of the high mortality in preantiseptic days and the usual recurrence following the early operations for hernia, surgical measures were seldom undertaken except in the presence of strangulation, and then no attempt was made to expose the inguinal canal, consequently small vesical hernias were often overlooked and the diagnosis was usually made postmortem. For this reason Moynihan was able to collect only 38 cases up to 1890. With the advent of the modern operations for inguinal hernia, which called for a free exposure of the canal and the isolation and ligation of the sac near the internal ring, a fresh impetus was given to the study of bladder hernia, and Moynihan found 112 cases of the inguinal and femoral vesical types, recorded between 1890

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*Read at the 70th Annual Meeting of the Illinois State Medical Society, at Rockford, May 19, 1920.

and 1900. Brunner, by including all forms of bladder hernias found 180 cases in literature up to the end of 1896. Skeel, collected 133 cases between 1896 and 1908. Heineck, in 1914, analyzed 164 vesical hernias that had appeared in literature since 1896. From 1915 to 1919, inclusive, I find that 18 additional cases of bladder hernia have been recorded in literature.

Varieties. Inguinal bladder hernia is by far the most frequent variety and almost always occurs in men. The femoral type is usually found in women. Both inguinal and femoral are more frequent on the right side, and in rare instances they are bilateral. Alessandri collected 9 cases of bilateral vesical hernia.

Other varieties which are very rare and only need to be mentioned are obturator, ischiatic, perineal and hernia of the linea alba.

Bladder hernia is customarily divided into three varieties as first proposed by Jaboulay and Villard: Extraperitoneal, intraperitoneal and paraperitoneal.

Extraperitoneal cystocele is the rarest of the three varieties. It is always direct in the inguinal region and as a rule is very small, although one has been reported as large as an orange. Moynihan remarks that a careful study has shown that many so-called extraperitoneal hernias have a small diverticulum whose outer wall of peritoneum is the inner covering of the sac, and in reality, they are paraperitoneal. Because extraperitoneal hernia lies entirely outside the sac, it is most liable to injury by being opened through mistake for the sac itself, especially if the operator has lost his landmarks and searches for the sac internal to the deep epigastric artery.

Intraperitoneal cystocele has a complete hernial sac that enters the inguinal canal external to the deep epigastric artery. The bladder enters this sac completely covered by peritoneum. The portion of bladder involved is almost always the upper part of the posterior surface. These hernias are sometimes very large and are always secondary in origin. The rings are widely dilated. The sac may contain only bladder, or it may be associated with omentum and intestines.

Paracritoneal vesical hernia has a sac, and may be direct or oblique. The bladder is on the inner side of the sac and the peritoneum of the inner wall of the sac is the serous covering of the outer portion of the bladder. The remainder

of the bladder outside of the abdomen has no peritoneal covering. The bladder is outside of the sac and not a part of the hernial contents.

The paraperitoneal form is by far the most common and may contain a small section of the bladder or the entire bladder, prostate and ureters. According to Sjoval, 51 per cent of paraperitoneal hernias are thickly covered with fat (Lipome herniare of Verdier). After freeing the cord and reducing the hernia, this mass is sometimes mistaken for a lipoma, a cyst of the cord or a second sac. Lotheissen remarks that the more careful the stripping of the sac up to the deep epigastric artery, the more chance there is of discovering cystocele in its early stages. Von Hacker has shown that in large hernia in elderly individuals the normal bladder can often be drawn into the hernial wound without difficulty, owing to the relaxation of the peritoneum. I agree with Skeel, who believes a considerable proportion of paraperitoneal hernias are artificially produced at the time of operation. Brunner, in 180 cases, found 5 extraperitoneal, 18 introperitoneal and 100 paraperitoneal.

Etiology. The most important causative factors are age and sex. Bladder hernia is primarily a disease of adult life and old age. It is much more frequent in males than in females. Imbert in 53 cases found 48 males and 5 females. Alessandri in 144 cases noted 115 males and 29 females.

It is much less frequent in children. Miller states that in 4,285 operations at the Hospital for the Ruptured and Crippled there were 8 cases of bladder hernias in children. On the other hand, Carmichael found 3 cases in 152 hernia operations on children. Alessandri reports 6 cases in children under 12 years of age and Skeel diagnosed a congenital femoral bladder hernia before operation in a girl 5 years old.

The principal predisposing factors are flaccidity and habitual overdistension of the bladder, especially in association with prostatic disease. Femoral hernia in women is favored by obesity and pregnancy.

Frequency. Inguinal bladder hernia is much more frequent than femoral. Jaboulay and Villard found 70 inguinal to 12 femoral vesical hernias. Bladder hernia is generally believed to constitute about 1 per cent. of all hernias.

In 2,543 consecutive hernia operations col-

lected by Moynihan, 23 were vesical. Blakeway believes one per cent. is much too low, especially for femoral hernia.

Diagnosis. According to Brunner, the signs and symptoms can be divided best into two groups, manifest and latent. 1. The cases with a large area of the bladder involved, and with unquestionable evidence of vesical hernia. 2. Those cases in which only a small portion of the bladder is involved and the typical symptoms are lacking.

A large or moderate sized bladder hernia is generally smooth, rounded and fluctuating and dull on percussion, and the fluid can often be forced into the pelvic bladder by lying down, or by firm and continued pressure. The tumor varies in size at different times, and is often smaller and softer after micturition. As pointed out by Sir Astley Cooper, it can be distinguished from hydrocele because it is not translucent. It also differs from hydrocele in that it is more or less reducible and reduction is followed by a desire for urination, which is often accomplished in two stages—the patient first empties the pelvic portion of the bladder, then on pressing the tumor or assuming a peculiar position, the urine in the cystocele flows into the pelvic bladder and is voided.

A sound will often aid in the diagnosis either before or during operation. If the tip can be passed into the bladder and then into the hernia and the sound felt just beneath the skin, the diagnosis is positive of cystocele. Cystoscopic examination is also valuable.

The greatest difficulty is probably encountered in those cases seen for the first time while suffering from strangulated inguinal or femoral hernia. The symptoms of bladder hernia that may have been present are masked by those of strangulation. A careful study of the case may throw some light on conditions and if the patient has had difficult or disturbed urination, or if the symptoms have been relieved at other times by micturition, the surgeon must be on his guard and look for bladder involvement at the time of operation. In rare instances symptoms of bladder hernia simulating strangulation have been relieved when the patient voided and emptied the portion of bladder that had been pinched in the sac. Femoral vesical hernia may present no symptoms except frequency of urination, and change in the size of the tumor after voiding.

Guterbock emphasizes the value of rectal examination. The normal bulging of a distended bladder toward the rectum is absent in vesical hernia.

Out of 175 cases of bladder hernias studied by Alessandri from a diagnostic standpoint, 5 were diagnosed before operation; 71 were diagnosed at operation without wounding the bladder; 76 were diagnosed during the operation with injury to the bladder before the condition was recognized, and 23 were not diagnosed until after operation.

Prognosis. If the bladder is not wounded the prognosis is as good as in inguinal and femoral hernia. There is a higher per cent. of recurrences following bladder hernia operations than in uncomplicated cases, which is due to the difficulty of closing the large opening left by the bladder. The danger lies in wounding the bladder. The most exact closure is not equal to the unwounded viscus. Infection of the wound, extravasation into the subcutaneous tissues, urinary fistula and leakage into the peritoneal cavity, in patients of advanced age and feeble resistance, make the prognosis grave.

Treatment. Operation is the treatment of choice for hernia of the bladder. It is seldom possible for the patient to wear a truss with any degree of comfort or safety. When a vesical hernia is diagnosed or suspected before operation, preliminary treatment directed toward the bladder is advisable—internal antiseptics, bladder irrigations or instillations.

The danger of wounding the non-herniated as well as the herniated bladder during operation must always be borne in mind. Any thickening of the upper part of the sac, especially on the inner side, should be examined most carefully.

After the neck of the sac is stripped up for resection, it should be freed of any thickening and should not have an excess amount of fat attached to it. Until the sac is completely freed from all surrounding structures it should not be transfixed, ligated or excised. Often the bladder is wounded because it is not seen. The greatest danger lies in cutting away a portion of it after it has been ligated en masse with the sac, and not discovering the accident until leakage of urine into the peritoneal cavity sets up a general peritonitis that may appear within a few hours after operation. Death has been known to occur within 24 hours after this accident.

Wounding the bladder usually occurs when the operator is working under difficulties, perhaps away from a hospital, and at times without an assistant, and with a poor artificial light which makes it difficult to dissect out the sac, and to identify the structures that may be adherent to it which would be promptly recognized under more favorable conditions.

In case it is impossible to identify a suspicious tumor, the quickest way is to open the abdomen above the hernia and examine it from the inside. The hypodermic syringe has proven useful as an instrument of diagnosis. Fluid can be safely aspirated with a fine needle inserted obliquely into the bladder wall. Testing with litmus paper will tell at once if it is urine. This test should always be applied to any suspicious looking cyst or hydrocele of the cord.

The sac must not be stripped up if it covers a considerable portion of the bladder, but excision should be made around the bladder attachment, going as high as possible on the outer side, where the sac is free. The bladder is loosened gently from its surroundings to avoid tearing, and returned to the abdomen and the wound closed by a circular suture or the purse string method. With the bladder safely out of the way the radical operation can be done for the hernia as far as conditions will permit.

What to do if the bladder is accidentally wounded: If the bladder is accidentally incised, it should be caught immediately with hemostats and a clamp placed across the opening. Compresses should be placed so that the urine will not contaminate the wound or reach the abdominal cavity. The tear or cut should be closed with interrupted sutures of chromicized catgut in two or three layers. No sutures should go through the mucosa which should be inverted in closing. The bladder is anchored in the lower part of the wound. The tissues that have been contaminated with urine are swabbed with iodine to produce adhesions and all dead spaces are carefully closed. A drain is inserted down to the bladder and allowed to remain for two or three days. A retained catheter is usually unnecessary, besides being the source of considerable discomfort. Catheterization every four hours is sufficient. Argyrol should be kept in the bladder—just enough to disguise the bloody urine so that the patient is unaware of the accident.

If the bladder injury is not recognized for 12 to 36 hours after operation, the prognosis is serious. One should suspect vesical injury in the presence of frequent and painful urination, vesical tenesmus, bloody urine per urethra or oozing through the dressings. If urine is entering the abdominal cavity the symptoms will be those of a fulminating general peritonitis. The wound must be opened immediately, the bladder injury found and sutured.

CONCLUSIONS

1. A careful history should be secured previous to operation, inquiring particularly for symptoms that might point to bladder involvement. Bladder hernia should be suspected in any case where a second sac, cyst or hydrocele is found. The inner of the two sacs is usually the bladder. It should always be borne in mind that bladder hernia may be present where there are no symptoms in evidence, especially in prostatic cases.
2. The sac should always be carefully freed from all surrounding structures before excision, and never transfixed or ligated blindly. If wounded, the bladder should be immediately closed with two or three layers of interrupted chromic catgut sutures.
3. The bladder should be anchored in the lower part of the wound so it will be handy in case of leakage. Argyrol instillations sufficient to discolorize the urine will keep the patient unaware of the injury.
4. The outlook is good if the bladder is recognized and not injured. The mortality of bladder wounds is high, varying from 12 to 25 per cent.

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THE TECHNIC FOR THE REMOVAL OF FOREIGN BODIES*

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The purpose of this paper is to present, and I hope elucidate, that most commonly met problem of war surgery, as briefly and concisely as possible, which in my judgment was the most difficult for civilian surgeons and men accustomed to war surgery. While the special regions, such as brain, nerves and thorax, received the attention of trained surgeons, the common wounds caused by missiles were often left to the neophyte. Those of you who have been doing reconstruction work, will agree that in some of the cases, the unnecessary amount of scar tissue, the ununited nerves, the stiffened muscles and joints, testify to our apprenticeship.

A proper understanding of these wounds presupposes some knowledge of the missiles that caused them, and not only the missiles themselves, but the effect of their different velocities on solid and hollow viscera and tissues; also the types of wounds caused by these projectiles.

The most common foreign body was the high explosive fragment, either from high explosive shells, bombs, grenades or shrapnel casing. It varied from metal dust to four or five inches in size. Its shape was as varied as its size. Its destructiveness was in direct ratio to its size and the nearness of the victim to the shell.

The next in order was the rifle ball, or machine gun bullet. Up to five hundred yards it rotated on its axis and might keyhole, beyond five hundred yards it slowed down and was less destructive. Its velocity was such that the energy radiated from its point of impact, like the ripples on water when a stone is dropped into a pond. In elastic tissue, like skin, the force of the impact was absorbed in a short radius, in muscles less so, hence the correspondingly greater destruction of tissue. In the shafts of bones, because of its rigidity, the force of impact was delivered to the joints, hence the synovitis. Shrapnel balls came

next, a round ball of lead or composition. They were less destructive and little used in the last year of the war. Revolver bullets rank in destructiveness with shrapnel, and were less frequently met with. The size of military bullets and shrapnel balls is well known and uniform, unless the bullet should break up and the core be found away from the jacket, which is a rare occurrence, but artillery projectiles vary greatly in size. X-ray operators usually classify them under five heads, and give the following names to their classifications:

1. Metal dust, fragments up to 1 mm. in diameter.
2. Minute projectiles, up to 4 mm. in diameter. The size of a grain of wheat.
3. Small projectiles, between 4 mm. and 1 cm. in diameter, up to the size of a large pea.
4. Medium sized projectiles and fragments between 15 mm. to 2 cm. in diameter, or the size of a large bean.
5. Large projectiles, various bullets and fragments over 2 cm. in diameter.

Thus in localizing projectiles, the x-ray operator has a standard of measurements, which is accepted by the surgeons. It is evident that projectiles of the first category cannot be removed without taking away a large amount of tissue, and those of the second can seldom be extracted. They can usually only be removed by the control of the screen, provided it has been possible to mark them, as the tactile sensation given to the surgeon's finger is often not sufficient to permit of their extraction. High explosive projectiles, because of their irregular and rough shape are much less tolerated by the tissues than bullets and shrapnel balls. It is further evident that this class of projectiles is much more frequently the cause of early or late septic accidents.

The formidability of a wound from a foreign body varies with the geographical localities. A densely populated country where the soil is highly cultivated produces more serious infections than an open sparsely settled country. Latitude, also, has an influence on the severity of infections. Compare the wounds of a moist tropical country with those of the dry plains farther north. It has been observed that wounds received in northern Canada are comparatively slightly infected. For example, the war area of Belgium and France produced much more formidable infections than would wounds received

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on our southern border, particularly in a dry season.

To summarize, we would say that climate, soil and rainy or dry seasons are important considerations in deciding how much surgical exposure a wound should have to sterilize it. The infection of these wounds varies greatly with the region of the body penetrated. The buttocks, the thigh, the calf and the deltoid region are the danger zones in the order named. In these regions wounds lodging a foreign body are classed as emergencies and require immediate operation. Wounds of the face and exposed parts of the neck are cleaner because the projectile does not carry clothing and debris into the tissues with it. The face has an added protection due to the ramification of its blood supply.

Thus it is nearly always possible to save practically all the skin and muscles in repairing face wounds. As evidence one has only to see the good results attained by trained facio-maxillary surgeons.

The size and velocity of a projectile determines its penetration and destruction of tissue. This is particularly true of high explosives, which by their irregularity of shape and flight tear ragged holes and pulp muscle and soft tissues, as well as smashing bone into splinters. The rifle bullet, however, may after it has steadied down in its flight, pass through a fleshy part of the body with a small wound of entrance and exit and comparatively little destruction of tissue, provided it misses the bone. We have seen many chest wounds where the bullet has passed clear through and the patient recovered, without operative interference. The same is true of liver wounds. The time intervening before a wound receives surgical care is a very important factor in determining the extent of sepsis. It is probable that up to 12 hours the bacteria have not penetrated deeply and probably not beyond those tissues destroyed by the missile or lying along its track. About four days after a wound has been received, unless there is considerable destruction of tissue and sepsis, the track of a wound is difficult to find. Resolution has begun and it takes a very experienced operator to follow the path of the missile. In other words, the track of a foreign body in which the tissues have stood the infection tends to become obliterated and the missile encysted. From what I have gathered from writers on this subject, and my

own observation of a large number of wounded among our allies, as well as German wounded on the eastern front and later coming into our hospitals on the west with the foreign body still in the tissues, I believe that the migration of projectiles in the tissues is much rarer than is thought. A projectile tends to become encysted and does not travel as does a needle. The exceptions are brain projectiles which, as is well known, tend to occupy the lowest point in the head of the patient. We would hardly class a missile loose in a joint as a migrating foreign body.

Some Types of Wounds. For the convenience of description, I have classified five types of wounds which with the addition of wounds of special regions would make six classes. In their order of severity, they are:

1. Wound of small entrance and if an in and out wound a small exit with a narrow and almost obliterated track, found when soft tissues alone are involved caused by rifle balls, revolver bullet, shrapnel and small pieces of high explosives. In the case of the rifle ball and high explosive the initial velocity is usually considerably reduced. From 500 to 1,800 yards from the muzzle of a rifle the bullet because of its reduced velocity is said to be in the zone of perforation.

2. Wound of entrance small, track large, ranging from 2 or 3 times the diameter of the missile to a large cavity filled with blood clot, pulped muscle and detritus. Such wounds are caused by rifle and machine gun bullets under 500 yards from muzzle and shrapnel shell casings and high explosive shell pieces.

3. Wound of entrance large; wound funnel shaped with apex at bottom, caused by high explosive and shrapnel. Missile very irregular and rotating in flight. A rifle ball in the first part of its flight rotates or wobbles on its long axis and if deflected may keyhole causing such an ugly, ragged wound. As a rule, the velocity is so great in the first 500 yards of flight that the missile passes clear through and makes an exit wound larger than the wound of entrance. Such bullets have been erroneously called explosive. What really happens is that the velocity is so high on impact that the tissues at some distance from the passage of the bullet are destroyed by the radiation of force. The destruction of tissue is equal to the weight times the velocity times the diameter and the initial velocity from 2,000

the bullets of modern warfare are 3 or 4 times the diameter and the initial velocity from 2,000 to 3,000 feet per second, it is easily seen that the character of the wound varies greatly at different distances.

4. Missile enters wound at an acute angle. Wound at entrance larger than track which is at an acute angle with the limb, caused by shrapnel, shell casing and high explosive shell pieces.

5. Either class 2, 3 or 4, including fractures. Where the velocity of a missile is low it may embed itself in the bone if it strikes a cancellous area, as for example, that part of the femur just above the knee. If, however, the missile still retains enough velocity to damage bone, it often knocks off a piece when it strikes the denser areas of the shafts of long bones, but when the size and velocity is great enough, it results in a compound comminuted fracture which because of varying velocities may be all the way from a fracture with a few splinters of bone to a badly comminuted mass with a loss of 3 or 4 inches of bone and a cavity filled with bone fragments from the size of bone dust to splinters 4 inches long, together with muscle detritus, soil and clothing. High explosives are the most common cause of these wounds. Next in order are bullets and lastly shrapnel.

6. Either class 2, 3 or 4 and wounds of the joints; the types of missiles the same as class 4.

7. Projectile wounds in special regions. It is obviously impossible in a paper of this scope to go into any detailed study of projectiles of special regions. One can only make a few practical suggestions as each region is mentioned. They may be classed as follows:

(a) Head and neck. As regards intracranial projectiles, extraction is necessary whenever the missile is easy of access and when there is an abscess or convulsions, but if the only symptoms in a clean wound are vertigo and chronic headache, the operation is still debatable. Two radiographs are made at right angles and we demonstrate to the radiologist the exact point on the head at which we are going to operate. He assures himself that it is possible to cause the normal ray traversing the projectile to pass through that point. Then he determines exactly its depth in question from the selected point by the localization process which he is accustomed to use.

Projectiles in the orbit and eyeball require

great care in operating and should, if possible, be done by one especially trained for that work. To remove very small foreign bodies in the pterygo-maxillary region may necessitate so much operative damage that unless they are causing pain and interfering with function they had better be left alone. It is astonishing how well these small pieces of metal are tolerated in the facial muscles. It is usually easy for the radiologist to localize projectiles in the neck and correspondingly difficulty for the surgeon to remove them in the lower part of the neck because of the many large vessels. Unless a foreign body is easily removed, the operation should be deferred until the surgeon can be prepared to make an extensive dissection and ligations and perhaps reflect the clavicle.

(b) Foreign bodies in the thorax. All intrapulmonary projectiles should not be removed unless it is demonstrated that the trouble from their presence should, at least, equal the danger and inevitable damage caused by the operation for their removal. The posterior mediastinum is a region where usually one should not attempt to extract a projectile. The anterior mediastinum is also a dangerous region to attempt to extract a projectile from.

(c) Abdomen. The surgeon's interest should be centered chiefly on the damage done to solid and hollow viscera, rather than on a search for the missile. If while doing the necessary reparative work and cleaning up, the missile is encountered, remove it, but one should avoid losing precious time in a prolonged search.

(d) Projectiles in the internal iliac fossa. In this locality extraction is difficult because the route of access which we may consider surgically the best, may be not easily placed in the path of the normal ray. Sometimes the projectile enters through the buttocks, perforates the iliac bone and stops in the center of the fracture. Again they cross the pelvis and lodge against the iliac bone of the opposite side in the thick psoas and iliac muscle. The best method of attack is the external perineal incision as is used for exposing the iliac vessels.

(e) Projectiles in the spine are of frequent occurrence. Those within the body of the vertebra may be left if they are deeply embedded. Those arrested by the transverse processes should be removed, as they cause great pain and may injure the posterior roots of the nerves. Lam-

inectomy is the procedure for those lodged within the spinal column.

(f) Projectiles in the deep perineum and ischio-rectal region are removed with difficulty unless the surgeon has a fresh wound to deal with and can easily follow the track. It is necessary to have the patient in the lithotomy position and that adds to the problem of the roentgenologist to place a normal ray in that position.

(g) Projectiles in the axilla and subscapular region are also difficult to extract because the scapula acts as an obstacle and may hold up the missile although fractured by its impaction. Here again the problem must be met by the roentgenologist who must extend the arms above the head in taking the lateral and prone exposure.

REMOVAL OF FOREIGN BODIES

It is still a matter of dispute as to whether all foreign bodies should be removed. While there is no controversy over the extraction of those likely to carry active or latent infection or to interfere with function, I believe that the small inert projectiles causing a minimum amount of tissue damage and no loss of function in large fleshy parts, such as the buttocks or thigh, should be left. At any rate, their removal should only be attempted if the damage caused by the operation is going to be less than the inconvenience felt by the patient if the missile is left. Of course, it goes without saying, that this decision should be made after consultation with the x-ray operator.

The operative steps for the removal of foreign bodies may be discussed under the following headings:

1. The treatment of the skin. It is never necessary to remove large areas of skin about a wound to permit free access to the deeper tissues for the skin readily retracts when incised over an injured muscle, and it is also much more resistant to infection. The correct procedure is, after washing and shaving to pick up the skin edge with the forceps and with the scissors cut away about one-third of an inch around the wound only including that part blackened or destroyed by the missile. Next a straight incision is made through the skin for the distance of from 1 to 3 inches beginning at the original opening, extending up and down the limb in the direction of the long axis, if it be the arm or leg. As the skin retracts, it becomes evident that we have a very satisfactory exposure of the

muscles. The fascia is next incised in the same direction as the skin. In wounds of the outer side of the thigh the dense fascia lata does not retract as readily as the skin. When this has been nicked across for the distance of an inch or so it gives ample access. Cutting of the fascia does not impair the function of the limb as it readily unites. The exception to this method is in superficial transverse wounds of the buttocks and back. Here after excising the wound of entrance one should convert the penetrating wound into a gutter wound severing skin fascia and muscle down to the track from the entrance of the foreign body. This method gives free access to the tracts.

The treatment of the muscle which is now fully exposed not only over the contused portion but also the healthy edge consists in the removal of all blood clot debris and dead muscle until healthy muscle fibers are exposed. Then all bleeding vessels are clamped and it will be found that some of the even large vessels may be plugged by blood clots that partly control bleeding so that the cause of a secondary hemorrhage may remain hidden unless healthy muscle is reached in the operation.

We now approach the foreign body by a method that I am convinced is superior to any that has been tried. By the use of retracting forceps, such as the Ombridanne or Lane, which grasp with a broad bite and do not tear, one is able by catching successive layers of muscle to retract the wound and at the same time climb down hand over hand, so to speak, to the region of the foreign body, readily enabling the operator to pass his finger to the bottom of the wound and steady the foreign body while he removes it with a long handle scoop which follows the finger down to the bottom of the wound. In one British unit I served with where this method was followed, the scoop was of such constant use that we nicknamed it the "surgeon's friend." The Pennington forceps are the only ones I have found in this country that can be put to the same use as the Ombridanne and Lane and not lacerate muscle, and they would be better suited for that purpose if they were olive-pointed instead of square, for in some cases the projectile makes a very small wound in the fascia of deeper muscles, and one can easily lose the track, but with such forceps one can readily catch the edges of a small opening in a deep muscle and thus

follow the track, for that is the *sine qua non* of success in finding foreign bodies.

Probing for a deeply embedded foreign body and an attempt to remove it by forceps not only mutilates tissue unnecessarily, but by so doing one is quite liable to make new tracks and become hopelessly lost in his search. The cultivated tactile sense of the first finger is the best searcher. At times the forceps must be used to remove a jagged piece of metal but never without the finger to palpate all about it and protect the surrounding tissue or vessels from injury.

In such wounds as those caused by high explosive projectiles in which dirt and clothing are found, particularly those that pass within a short distance of the opposite side of the limb, may require counter drainage, so that no blood clots may be allowed to collect in the bottom of the wound and favor infection. A dry, clean wound leaves no media for the development of bacteria.

In the removal of a projectile from the region of a fracture the same steps are followed with the addition that every particle of unattached bone is removed. Where a muscle is peppered with bone dust that portion of the muscle must be excised. It is not merely a matter of drainage nor the partial removal of a few isolated fragments, still less should it be a rapid and indiscriminate scraping of the fractured area bringing out everything that the instrument encounters whether attached or not. It is a free exposure of the whole area of the fracture and enough of the remaining ends of bone to determine their condition. The periosteum is protected and whatever fragments of bone are found attached are carefully arranged to restore, as far as possible, the continuity of the bone. If sharp spiculae are found on the ends of the bone the periosteum is scraped back and the spiculae cut off, as they may do considerable damage to the soft parts and promote sepsis and hemorrhage if the limb is not thoroughly immobilized, particularly during transportation.

The danger lies in the medullary canal. There is a division of opinion as to how far the canal should be exposed. Some maintain that as the ends of the bone are devitalized by the force of the projectile they should be removed. Others that the ends may be left and the canal cleared of debris. In one large fracture hospital on the

British front the conservative method was practiced with excellent results.

As the same methods apply to one joint as to another in the removal of foreign bodies it will be easier and more profitable to limit my remarks to the knee joint. Two sets of instruments should be employed, as only a pair of scissors, forceps and scalpel are necessary for the treatment of the skin. The simplicity of the operation is very little interfered with. The skin is treated as before described under penetrating wounds, except that the incisions from the original wounds need not be as long. The excision of the wound area and the longitudinal incisions complete, the operator replaces his gloves with clean ones, resterilizes the wound and vicinity with iodine or 2 per cent. picric acid in methyl alcohol and cuts away the ragged edge of the synovial membrane where the missile has penetrated. The opening is enlarged in the line of the skin incision or transversely as is found best; the foreign body approached, and if found loose removed with scoop and finger as has been described. If it is slightly embedded in the articular surface it is removed and the injury in the bone cleaned. If deeply embedded in the cancellous tissue, so that its presence cannot be felt on the articular surface, its removal is debatable, when it is known that no dirt or clothing has been carried in, for we have seen that these cancellous tissues often tolerate the presence of foreign bodies very well.

When there is a more extensive destruction of the joint, all loose pieces of bone should be carefully removed in such a manner as to retain as much articular surface intact as possible. After the removal of the projectile the joint is washed out with sterile salt solution or 2 per cent. ether and the synovial membrane closed. It matters little what kind of a solution is used in cleaning a joint so long as it is sterile and not too irritating. Drainage is never used unless one wishes to produce adhesions, therefore the capsule of the joint is closed. The skin wound may be sutured or clipped and allowed to remain for a later closing. It is not the purpose nor is it possible in a paper of this length to discuss the later complications in wounds due to foreign bodies but only to touch on the primary treatment in so far only as concerns the removal of the projectile.

SUMMARY

Success in the removal of foreign bodies demands some acquaintance with the ballistics of the missiles to be removed as well as their effect on solid and hollow viscera and tissue at different velocities. The surgeon must work in coordination with the Roentgenologist.

In deciding the extent of surgical exposure necessary to sterilize a wound the surgeon must know the climate and the character of the soil where the man lies at the time he was wounded. He must know anatomy and particularly the danger zones. His judgment must be trained to decide quickly the operability of a case. The trouble resulting from the presence of projectiles in the body must be weighed against the inconvenience or dangers resulting from its extraction. Complete exposure of the entire wound and removal of all dead tissue and detritus is the only way to stop sepsis. The method described above for the removal of foreign bodies has stood the most severe tests and can even be successfully carried out when x-ray apparatus breaks down.

SOME COMPLICATIONS IN CASES OF ACUTE MASTOIDITIS*

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When we have come to a position where we look upon our cases of acute otitis media as being likewise cases of acute mastoiditis, then will we have arrived at a place where we will have less of severe conditions of mastoiditis with which to deal. I, therefore, make a strong appeal for the education, not alone of ourselves, but the general practitioner and the layman in general that a pain in the ear is to be treated with due attention, and expert attention at that.

It has been my experience again and again to meet men in the practice of medicine who assert that they have had no cases of mastoiditis during a given season. Upon questioning a little closer an admission is made that a number of their cases had had some pain in the ear for a few days, then a discharge, but there has been nothing said about it by the patient and as a result they go on to a possible recovery or the development of a chronic suppuration of the ear. The fact is

that a large percentage of such cases are sufferers from diminished hearing in one or both ears in various degrees, with noises, dizziness, odorous discharge and possibly are suffering pain.

I am not an enthusiast when it comes to the treatment of cases of impaired hearing. One may have his office walls lined with such cases and so long as procrastination is the part played by those who have these unfortunates in their care, then just so long will this state of affairs obtain. Deafness, aside from inevitable causes, such as injury, septic infection as from mumps, scarlet fever, etc., need not exist as it does today.

Such being the case the medical profession as a whole is causing a just criticism to come to it by reason of the lethargy displayed in its attitude toward ear infections in general.

We have only to study the reports coming from the various cantonments of the army to see the great value of early myringotomy in cases of acute otitis media. In the camps where early myringotomies were practiced there was had a very small percentage of operations for mastoiditis. I grant that a large percentage of acute otitis media cases will recover from their acute symptoms and be seemingly well, wherein nature is left to attend a case of inflammation of the middle ear, but the percentage of impaired hearing and chronic suppurative otitis following is very large.

In my own practice, I deem a case that continues to suppurate after three weeks' time from the onset of the symptoms will not repair kindly if left alone, and so I elect to open and drain all such cases that will submit to the operation of simple mastoidectomy. In ten days to two weeks most of them are healed. The hearing is markedly improved and there is but little evidence left to tell that anything has been done in a surgical way. Some cases are closed in their entirety with drainage through the canal and with an incision of a "T" variety made in the posterior wall as for a radial mastoid closure. This gave me ideal healing of the wound in 8 days' time in one case reported before this section at last year's meeting of the Illinois State Medical Society. Michael clips are used as a general rule and I find much less trouble resulting from their use than I formerly encountered from the use of sutures of silk worm gut. As a rule two are placed at the upper and lower angles of the wound. In a week's time

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others are placed to draw the wound almost together in its entire extent. I have found that by doing this I limit very markedly the time of after-care and dressings. The type of the infection and the question of its extent and virulence, influence me greatly when it comes to the matter of how I am to deal with my mastoid operation when it comes to the question of drainage. A mild infection can very well be handled by placing the drainage through the external canal with the making of the flaps as spoken of before. I think it very important that we extend our operation to such an extent that it will favor this ready healing of the wound. More pains taken at the time of operation will limit greatly the period of healing.

There is one complication of chronic mastoiditis that has my very honest concern, and that is in cases of cholesteatoma. If ever there is a doubt as to the wisdom of performing a radical mastoid operation, then I would say that in cases of chronic suppurative otitis media with cholesteatoma one should not be deterred from doing the operation. It may be, as it was in two special experiences of mine, that the cholesteatoma process had made a complete exenteration of all the cells and simply left a shell of the cortex, so that on the first stroke of the chisel a mushy mass was encountered. In such cases it is well to have proper control of the chisel on the initial attack upon the cortex of the mastoid bone.

There is a complication of mastoiditis that again arouses my intense interest and that is a situation where there is an accompanying sinus thrombosis. My experience has been limited to that of personally dealing with this complication in a series of seven cases. In all but two they were a result of an acute exacerbation of a chronic suppurative process in the mastoid. The symptomatology was so much the same in all the cases as to write their characteristics indelibly upon my mind. I have had other cases that I expected were cases of sinus disease and perhaps were, but they were not the classical cases where one finds the expected clot in the knee of the sinus upon opening it. I firmly believe that in two or three cases where opening was made and free hemorrhage was obtained, that this procedure was responsible for the washing out of a possibly infected thrombus that might have re-

sulted more disastrously or at least have produced later on the classical symptoms of lateral sinus thrombosis in toto. I am a firm believer in doing all that is indicated at one sitting if it is possible. Then get out and remain out so far as surgery is concerned and await with patience the tedious days of recovery that are before me. What I have seen in cases of secondary operation in cases of sinus thrombosis or other mastoid surgery, has convinced me that one should do all that is to be done the first time and rest the case on that piece of work. Nature will do much for these cases of lateral sinus thrombosis and it does not behoove the aural surgeon to become a "Meddlesome Matty," but rather assume an attitude of "watchful expectancy" and then be not too ready to lose control of the situation.

I have seen cases die in two or three days' time after secondary operations and I have seen others just as serious as to conditions go along and recover after running a variable course of chills and fever. These fluctuations in temperature are bound to occur and one should be prepared to expect them. Proper nursing, with good diet, and above all mental rest with plenty of fresh air and sunshine will do a deal of good for these cases.

A condition resulting in a blocking off of the lateral sinus both downward to the bulb and beyond and backward to the neighborhood of the torcular, has been encountered by me where I could not get free bleeding and I had to be content with packing the sinus and finishing the operation; preliminary ligation of the jugular having been done as the first step in the operation together with a radical mastoidectomy. In each of these cases there was a recovery that was encouraging to all concerned.

A recent experience was had with a case of chronic suppurative otitis media wherein I had performed the usual radical mastoid operation and closed with drainage through the prepared external auditory canal. Infection occurred at the tip of the mastoid and extended downward in the sheath of the mastoid muscle. Early removal of the skin sutures seemed not to lessen the process. When it was evident that the pus was burrowing downward and had reached nearly the middle of the neck, I determined upon free drainage and therefore made an opening through the skin and muscle over the lowermost point of

bulging. Two rubber drainage tubes were inserted in the track of dissection caused by the burrowing pus. The original mastoid wound resembled a large head of cauliflower; with exuberant granulations and copious foul smelling discharge. The wound was exposed to the air constantly, a part of the day to the direct rays of the sun, to the therapeutic light and moist dressings of Dakin solution were also used.

This complication I believe was caused by my zeal in closing entirely the line of incision and not including a few strands of silk-worm gut as is my custom in these cases. I believe this is more necessary where there has been some injury done to the fibers of the sterno-cleido muscle. Then again upon the first complaint of pain in the neck one should inspect the wound in order to know if all is going well. By using care in these situations I believe that much trouble may be avoided.

Resultant heavy and depressant scars, as a result of mastoid surgery, are at times unavoidable, but more careful work, not only at the time of the operation, but during the convalescence, will help a great deal in making for cosmetic results which will be appreciated by the patient and will be a source of pride to the surgeon in the years to come. There is a tendency to make our incisions too far back from the attachment of the auricle and thus a great many depressant scars are caused.

Erysipelas has been my *bete noir* in two cases. This complication surely makes times interesting both for the patient and the physician. One is confronted with a chart that is recording the facts of two conditions, one that of the mastoid disease and the other the erysipelas. I have found the best treatment at my hands to limit the spread of erysipelas of the face to the use of 95 per cent phenol carefully applied with an applicator to a small area and this in turn neutralized by the application of alcohol and the use of cooling solutions to be applied upon gauze dressings. It is hard to care for a case of radical mastoid with this complication of erysipelas. The wound most usually breaks down, there is great swelling of the auricle and there is a general mussy field at the site of the operation. Granulations usually get ahead of you within the newly made cavity of the mastoid and you do well not

to have to clean these out by a secondary procedure.

One should be prepared for sudden collapse in cases of erysipelas as there does occur a heart deterioration due to the toxins of the infection. It is well therefore to warn the patient not to attempt to be up and about until you have given permission. One experience with a collapse in which my patient all but passed out, causes me to speak of this point.

Another complication, and one simulating erysipelas, is that of perichondritis. One has the redness here as in erysipelas, but there is not the temperature curve nor the chill that attends erysipelas. There is a distinct pain and tenderness. Once only have I encountered this condition. It occurred in a case in which the after-care was done by one not accustomed to the care of a mastoid wound, and I believe the perichondritis was caused by overzealous packing and probing with a consequent spread of infection over the perichondrium of the aural cartilages. This again leads to poor results both in acute and chronic mastoiditis. The main complication, aside from the delay in healing, is the resultant great tendency to atresia in the ear canal.

Personally I have had no experience with the permanent injury of the facial nerve. I have witnessed a partial paralysis of the face after an operation but which cleared up after a few days. I had one case where a paralysis came on two weeks following a simple mastoid operation, and which cleared up after the discharge of a slight amount of pus that had evidently been overlooked and which was in cells not uncovered at the time of the operation and which lay close to the pathway of the facial nerve.

I have witnessed the severance of the facial nerve at the time of operation with immediate cosmetic disaster.

There is one note of warning I wish to sound here and that is in regard to the packing of our mastoid wounds. Cannot we in our teaching and in our minds get away from the idea that we are called upon to pack our wounds in the sense that an ice-cream man packs his ice-cream freezer? I believe that if we observe some caution in this regard we will avoid a lot of complications, such as extension of infection, or at least meningeal irritation or a disturbed inner ear by reason of increased pressure due to tight

and heavy packing. Too many have the idea that they are called upon to "pack" an ear after operation much as we did the old muzzle loader shot gun. In a case of acute mastoiditis we are defeating the first principle of the operation by doing this thing. Why not speak of it as inserting wick drainage.

This leads me to speak of wool yarn xeroform drainage. If we use the wool yarn impregnated with xeroform then we will have a material which to my mind makes the ideal drainage material for mastoid cases. I usually use about twenty-five strands of the yarn in each of three situations. One lot I direct to the upper part of the wound, then another carefully placed to the autrum and the third to the lower angle of the wound. These are readily removed on the fourth or fifth day and new ones inserted. There is no mesh as with gauze, for granulations to form through and their removal is accomplished without so much pain as where layer upon layer of gauze has been wadded and pushed into the wound.

It is in very young children that acute mastoiditis can give one a picture that is hard to study and arrive at a proper diagnosis of the case at hand. Such a case I will relate; also some other cases of interest:

Case: Z. X. Baby girl, two years of age. In January, 1917, the illness occurred and was thought to be an intestinal infection. There was nausea and vomiting, apparent pain in the abdomen, temperature ranging from 101 to 104. Examination of the ears revealed a moist discharge from the right ear. Owing to the other symptoms referable to the intestinal tract it was thought, by consultants, that the main focus of infection was the intestinal tract rather than the ear, and the patient was treated accordingly. There being no apparent improvement in the condition and the discharge from the ear continuing, it was decided that a simple mastoid operation was indicated and this was accordingly done. Infection was present throughout the mastoid cells and the patient very promptly responded to the operation and the convalescence was rapid.

Case, B. Boy, aged 8 years. Had severe pain in both ears which had not been given other care than that of drops to deaden the pain. As a result the membrane in both ears ruptured spontaneously. The discharge then ceased and when I was called in found the boy in a stuporous state. A double mastoid operation was performed but the symptoms of meningeal irritation became more marked and the child died in three days' time. This was a case where a double paracentesis should have been done early. Procrastination caused the disaster.

Case, J. D. B. Six weeks previous to my having

seen the patient there had been a pneumonia. There was an infection of the middle ear at the time of the pneumonia but no attention was paid to the condition of the ear other than general care. Six weeks after the onset of the pneumonia he was brought to the hospital by his physician. The process had extended so that there was great bulging over the mastoid process, displacement of the auricle, foul discharge, and great tenderness elicited over the entire mastoid upon making pressure of slight degree. The lung condition had not cleared well and on account of the patient's extreme weakness it was deemed best to operate on the case under scopolamine, morphin and atropine injections and these were given in three doses at 6, 7, and 8 a. m. previous to the operation performed at 9. 1 per cent novocaine was used over the mastoid area.

There was great destruction of bone, and a fistulous tract extended well over into the zygomatic cells. The patient withstood the operation well and I carried on a line of conversation with him during the entire time of the operation as I believe that this helps to support the patient. An uneventful recovery was had and the patient returned to his home in nine days after the operation was done. I cite this case as one of the complications of a pneumonia and draw to your attention the importance of watching for ear complications in the acute infections. An early myringotomy here would have saved the patient all this trouble.

A case of mastoiditis in a young lady 17 years of age. Miss M. Had had the influenza three months previous to the time I saw her. There was a fistulous opening one inch above the right ear as a result of the opening of an abscess that had pointed in that region. Not much thought had been given to the cause of this abscess and the fact that there had been an infection of the middle ear for three months before had been lost sight of. I found upon examination much evidence that the original focus of the infection was the middle ear and determined upon an operation. Owing to the fact that the process had extended over the period of time that it had—three months—I was somewhat at a loss as to whether to do the radical or simple procedure. I determined upon the simple mastoid operation. The incision was extended upward to include the fistulous tract in the temporal muscle, which went well forward over and in front of the auricle. Two weeks following the operation I was confronted one morning with a total paralysis of the right side of the face. In a day or so there was a rather free discharge of pus from the ear canal, and in a few days' time the facial nerve seemed to regain somewhat its function. From then on the improvement was slow but finally was complete.

Another case with some peculiar characteristics was that of V. B., aged 7 years. History of having had a cold in the head for several weeks resulting in infection of the middle ear, with pain in the ear, followed by discharge. There was at times considerable rise in temperature during the ten days previous to the time I saw the child. There was no history of chills, but the temperature had been as high as 105.

Insufflation of some boric powder was made about this time when the discharge ceased for a time and with a consequent rise in temperature and much pain in the ear.

When I first saw the child I found it to be in a rather somnolent or apathetic state. She was very slow in answering questions, was "not herself," so the mother informed me, and spent much of her time in cutting out paper dolls with the aid of the nurse.

I watched the case for another 36 hours. There were no chills and the temperature remained constantly high. The simple mastoid operation was done and wick drainage was instituted. There was no great destruction of bone and but little free pus was encountered. The patient became gradually more and more dull and the temperature remained high.

Three days after the operation the patient was seen in consultation with Dr. Norval H. Pierce and at which time the drainage was removed and new inserted. Supportive treatment was given together with cacodylate of soda to combat the infection. It was suggested that in case the symptoms did not improve in 24 hours that the sinus be uncovered, likewise the floor of the middle fossa to be opened by way of the attic. This was offered but not consented to. In another 48 hours the patient was seen by Dr. Peter Bassoe who made no positive diagnosis of the case at the time he saw the patient. At no time I might say in the interim following the operation could one, from the physical findings have made a diagnosis other than a possible cerebritis. Later on and as a terminal finding, there were stronger points of a general meningitis, but the picture was not clear and distinct of this disease. I have thought more recently of the possibility of our having had in this case a complication of encephalitis of the lethargic type with which to deal, beside the middle ear infection and that it gained access to the cranial cavity through the ear.

In presenting this paper to you I have in mind the presentation of these facts gained from my experience in a considerable number of cases met with in my practice of some fifteen years. Summarizing the points I wish to make I would state it thus:

1. The desirability of getting the early and hearty co-operation of the general medical man in cases of acute mastoiditis.

2. Acquaintance of the public as to the necessity of expert knowledge in the treatment of all ear infections.

3. Necessity of obtaining a clear and succinct history of our cases of mastoiditis.

DISCUSSION (Abstract)

DR. PIERCE emphasized the fact that it has been proven that mastoid complications stand in direct

ratio to the time elapsing between the onset of an otitis media and the time the pus finds egress through the tympanic membrane. If you are not sure that there is sufficient pressure to produce the pain, you had very much better open the tympanic membrane under antiseptic conditions than to delay.

At one time he believed it was good practice to take away the tip, but quite a number of these cases had an infection of the deep tissues of the neck and he now regards it as bad surgery to remove the tip unless you are absolutely compelled to. You very rarely have an invasion of the deep tissues if even a small portion of the tip remains.

The general surgeon should not hesitate to seek the advice of men who are especially skilled in this sphere at a very early date. It is difficult to determine when to operate in these cases of mastoiditis. He is not an advocate of early operation. He does not believe early operation prevents complications. With acute otitis media in a child below ten who has pain over the mastoid, tenderness, some swelling and a temperature of 102 or 103 in the first week, he does not believe that the indications exist for opening the mastoid. We only operate in the first week when there are complications present, and he does not believe that operating in the first week under these conditions prevents complications. He has reason to believe that in New York City, where early operations are performed in these cases, especially on Westerners, that complications are the rule.

DR. HAYDEN said that the mastoids are opened very much earlier in New York City than they are here, but not earlier on Westerners than others, however. He does not think the fact that an individual is ten years old should make a condition which requires the postponement of operation when a pus infection is present, when the other symptoms, the temperature of 102 or 103, a tender mastoid with a great deal of pain, etc., indicate the necessity for operation as soon as the drainage through the tympanic membrane seems to be insufficient.

He was glad to hear Dr. Pierce say that the removal of the tip in many cases,—in fact, in the average case, is unnecessary.

In operating on the cholesteatoma cases where the disease has practically dissected out the mastoid cavity, great care should be used, if you are operating with a chisel, so that the very thin cortex may not deceive you and allow your chisel to gouge through into some deeper structure.

He considers the caloric tests are of immense value and regrets that the chair tests, used so extensively in the aviation examinations, have been popularized much more than the caloric tests.

Much care should be taken that the erysipelas is not transferred to others in the hospital, by the wearing of appropriate gowns and gloves. Second, considerable confinement to bed should follow on each erysipelas infection, because a certain number of these cases if allowed to get up too soon will collapse because of heart failure.

In regard to packing, he agrees with what Dr.

Clark had to say, with this exception, that the wound should originally be packed very loosely, but believes that tight packing in the later weeks is the very best plan.

DR. BECK considered it very fortunate if an operator coming through a service such as Dr. Clark has had escapes facial paralysis, because it does occur, as this specimen shows. It might occur even with the knowledge of anatomy, pathology, and all the necessary equipment. It had been his privilege to give testimony in several cases in court wherein the otologist was being sued for malpractice because he produced a facial paralysis, and he knows only one specimen in which the facial nerve is abnormally located. Therefore, it is necessary that this specimen be carefully drawn and published, because based on that fact has been the verdict that the doctor may not be responsible for the paralysis.

DR. HAWLEY stated that he did a radical mastoid on all the specimens he presented and never came anywhere near the nerve at all.

DR. BECK called attention to one point regarding the curing up of chronic suppuration not related by Dr. Clark, viz., attention to the nose and throat.

He thought the x-ray should be mentioned as an aid in diagnosis of these cases.

He always closes his incision, but puts in a stab wound with a small rubber tube through the antrum. The antrum is thus opened wide for drainage of the middle ear.

He thought that the electrically driven burr is not given the support or trial that it deserves, especially in so-called cirrhosis of the mastoid as it is much easier to use and much less liable to complications.

After you have a facial paralysis, you should always remember that it still can be repaired by a plastic operation.

DR. CLARK (closing): I am glad to have the discussion brought out so fully. My paper was limited, and I did not cover all of the points in mind. It is giving you the situation as observed by me, complications and the cause of those complications. I am glad to know that Dr. Pierce believes as he does regarding my remarks.

I don't remove the tip of the mastoid, but I do get at that last large cell in the tip of the mastoid if possible. Just recently I had a case of necrosis of the tip where I actually lifted it out.

Regarding early operations,—we many times have to operate in a few days because of our complications. I believe that the line of demarkation is established in about three weeks' time, and I believe we get better results by waiting that long.

The matter of packing is quite a problem. That was brought to me quite forcibly recently. I firmly believe there is a tendency to pack our ear cavities too much at the time of operation. I am glad Dr. Beck brought out the point about facial paralysis. I may have cases of facial paralysis in the future, and I want to be on the safe side.

ADRENALIN BY THE MOUTH OR RECTUM

To obviate the necessity of giving adrenalin hypodermically the oral and rectal methods have been tried. Lesne says that adrenalin is not destroyed by pepsin nor pancreatin but that the liver seems to deprive it of some of its toxicity so that it has to be given in large doses to obtain effects. Adrenalin is much more toxic when given by the rectum and Lesne infers that the abundance of the anastomoses of the hemorrhoidal veins enables the adrenalin to be carried directly to the vena cava. For this reason it seems preferable to give adrenalin by the recti, rather than by mouth because it gives results with smaller doses. (*Soc. med. des hopitaux de Paris*, June 11, 1920.)

HYPOGENITALISM AND HYPOPLASIA OF THE TESTICLES

In the *Weiner klinische Wochenschrift* for 1920 No. 9, Kyrle discusses the frequency of lack of development of the testicles in boys and the lack of development consequent upon it that is felt more or less throughout life. Kyrle insists that this fault entails a constitutional inferiority often persisting throughout life and affecting the general efficiency in a marked way. This Status Hypoplasticus leading to hypogenitalism and constitutional degradation, has for a structural basis an excess of interstitial tissues which more or less compresses the seminal tubules. At the age of puberty these hypoplastic tissues are urged to develop but the interstitial tissue may prevent the expansion of function on the part of the seminal tubules and confer upon the testicle the stigma of functional inferiority. The recognition of this menace at the earliest possible moment is the very best way to correct it. Since the pituitary, thyroid and suprarenals are all stimulants to the functional developments of the tubules, their use, together with preparations of testicles and prostate should offer the best hope of overcoming this fundamental fault.

TOXICITY OF ARSPHENAMIN

One of the factors in influencing the toxicity of arspenamin and neo-arsphenamin is brought out in a recent report by Roth,¹ who has determined, by experimental methods, that shaking a solution of the drugs for even one minute brings about marked increase in toxicity. The presence of air is necessary to induce the added toxic action, as shaking in the absence of air is not accompanied by any increase of poisonous action. It is pointed out that preparations which are soluble with difficulty are likely to be shaken to aid in hurrying the drug into solution, with the risk that clinical reactions may occur. The paper illustrates strikingly the part that may be played by what may seem relatively insignificant factors in the technic of preparing the solutions of arsenicals of the arspenamin group for use on patients.—*Jour. A. M. A.*, Oct. 16, 1920.

1. Roth, G. B.: The Effect of Shaking Alkalized Aqueous Solutions of Arspenamine and Aqueous Solutions of Neoarsphenamine in the Presence of Air, *Pub. Health Rep.* 35:2205 (Sept. 17) 1920.

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DECEMBER, 1920

Editorial

A MERRY CHRISTMAS

A MERRY CHRISTMAS IS THE JOURNAL'S BEST WISH TO ITS READERS,
ADVERTISERS AND FRIENDS

Christmas time brings to all a common thought, that all are brothers, fellow actors play-

ing their several parts in one small corner of the world's great stage. Each has his part and all work to the same end. Christmas is the one time in the year when all stand on the common foundation. Barriers are more reduced at this festive season than at any other. For a few hours the mists are dissipated, we see face to face, not through an atmosphere surcharged with business pressure, but are tinted with the rainbow rays from the Garden of Friendship and Charity.

What a powerful sermon there is in the old legend, so beautifully versified by Longfellow: At the hour of noon it was customary in the ancient monasteries for the poor to be fed at the gates at the hands of the monks. One day the monk whose turn it was to dispense the charity was deeply engaged in his devotion. The bell rang out the hour of noon, and he knew that the needy, with their gaunt faces, were anxiously waiting for him.

But still he tarried, debating the question, "Should he linger at the gate of heaven or hasten to the gate of earthly suffering?" The temptation to remain on his knees gazing upon the face of his Lord, who stood in vision before him, was strong, but breaking away, under protest, from his prayers he went out to feed the hungry ones; and lo! upon returning what was his delight to see the Master waiting to welcome him, with a smile of commendation sweeter than he had ever worn before, and the words of benediction and of warning, "Hadst thou stayed, I must have gone away."

The physician, more than any other person in the community, knows the needs of the sick and needy and the places where happiness is necessary in order to meet the full enjoyment of the Christmas season by those who are unable to make the necessary provisions for themselves.

Let us go forth, therefore, during the Yuletide season dispensing good cheer, both material and spiritual, as has been the custom of the medical profession throughout the ages.

WISCONSIN HOME-COMING

The State Medical Society of Wisconsin will celebrate its seventy-fifth anniversary by holding a "home-coming" meeting in 1921. The officers are anxious at this time to secure for mailing purposes the names of all former Wisconsin phy-

sicians, whether they have practiced there at some time or left Wisconsin to study medicine, practicing elsewhere after graduating.

Former Wisconsin men will confer a favor by sending their names and addresses to Dr. Rock Sleyster, Secretary, Wauwatosa, Wisconsin.

SMALLPOX IS AGAIN SPREADING RAPIDLY OVER THE WORLD

No doubt the war is largely responsible for the increase in smallpox. The war brought together people from all parts of the world. Many came from countries where there was much smallpox. Millions of refugees in the fighting countries of Europe lived under insanitary conditions. Because of the stress of other matters vaccination became very lax and as a result smallpox has increased rapidly.

In the United States, smallpox does not exist where vaccination is rigidly enforced. In our large cities, however, isolated cases are brought in on ships and on railroads especially from our lumber camps, but in recent years we have been free from epidemics because of the small number of unvaccinated people in our midst. In unvaccinated communities many cases occur each year. The Province of Ontario, Canada, this year has suffered from a very serious outbreak, having many thousands of cases, which necessitated the United States authorities declaring a quarantine against all travelers from that Province.

In 1918, the Government records show that there were approximately 70,000 cases of smallpox reported in the United States. There probably were as many more cases that were not reported. Practically all of these cases had never been vaccinated, or had not been vaccinated in ten years.

In the United States we have become very careless towards the dangers from smallpox. Because of previous thorough vaccination of the people of the country we enjoyed many years of relative safety from the disease. Cases were few and mild. Today the disease is rapidly increasing and may change from the mild to the severe type. If we do not rigidly enforce vaccination we may at any time be confronted with conditions such as are now prevailing in many countries of Europe and Asia.

Before the discovery of vaccination smallpox

was the most loathsome disease known. In pre-vaccination days it was the usual thing to see people walking through the streets with faces disfigured because of smallpox. Few people reached middle life without having contracted the disease.

With the discovery of vaccination in 1798 conditions changed. Following the discovery, vaccination was generally practiced by all civilized countries. The number of cases of smallpox and the deaths therefrom dropped rapidly. In countries which had compulsory vaccination hardly any cases or deaths from the disease occurred. The important thing to remember is that in vaccination we have a means by which to control smallpox.

WOMEN LIVE LONGER THAN MEN. WHY?

From the great common diseases such as tuberculosis, pneumonia and heart disease more men die than women, not only in the community as a whole, but at any given age or in any given year.

The tiniest girl baby resists the infections and poor food diseases of infancy better than her boy brothers and cousins. Women have a lower death rate from the acute infections than men have. They bear persistent and agonizing pain better, they stand the shock of surgical operations better, more of them survive to old age, and more than twice as many of them become centenarians.

The 1910 United States census report shows that from the very first month of the first year of life and for every successive year and decade following the death rate is higher in boys and men than in girls and women. That more women reach extreme old age than men and that there are in every community nearly 20 per cent more women over seventy-five than there are men.

A study of the millions of surplus females in European countries reveals that, although there were more boy babies born than girl babies, the girls, by their superior toughness and resisting power, showed a lower death rate at every age of life than the boys and forged steadily ahead through each successive decade, until about middle life they outnumber them heavily.

Neither American nor European statistics throw any clear light upon the question of the reason for the superior vitality and viability of women, many explanations are mentioned, first

and most naturally of all, is the explanation that women living a much more guarded and sheltered life and indoor life, are less exposed to accidents, injuries, infections, to say nothing of battle, murder, etc. Statistics confirm this claim to the extent that something like four-fifths of all the victims of industrial and railroad accidents, homicide and criminal violence, are men. More men also die of the great infection, like pneumonia, tuberculosis, rheumatism and typhoid, probably for the reason that the habit of their lives bring them much more frequently into exposure to the germs of these diseases.

However, accidents and homicides are not sufficient explanation for the reason that they comprise only about six or seven per cent of the total mortality, while the difference between the death rate of males and females at all ages under fifty ranges from twelve to twenty-five per cent. While the excess of men over women who fall victims to tuberculosis, typhoid, etc., is only a fraction of one per cent.

That the accident and exposure theory is not a sufficient explanation is shown by the following: The superiority of female vitality over male is greatest and most unmistakable, not merely in the earliest years of life, but in the very earliest months. In fact, it is greatest in the very first year after birth, when the death rate among boy babies is nearly thirty per cent higher than among girl babies.

Then comes the reasonable and valid explanation that the superior longevity of women is due to the much greater moderation and morality of the habits of life, their almost total avoidance of tobacco and alcoholic excess, but even this does not explain, inasmuch as the superior viability of women is as marked in France and Germany where women use alcoholic liquors as an article of daily diet, just as regularly as men do, as it is here in America where only one-fifth of the women take alcohol habitually. It is as notable in prohibition states as in wide-open ones, even in the foreign-born of our population a considerable percentage of whose women use alcohol habitually the superiority of women over men is slightly greater than in our native-born population.

So far we have listed these environmental conditions which seem to be in favor of women, and yet have failed to explain the mystery of their

superior survival power when in every other respect they stood equal with men, we have still to take into account the actual handicap which the mere fact of sex imposes upon them. First and most unfavorable of them all is the extraordinary indoor life which the vast majority of women are more or less compelled to lead.

Next comes the risk and fatalities of child birth and of the diseases peculiar to women, including their much greater liability to cancer at certain ages. In fine, we seem to be thrown back upon the conclusions that there is an inborn and inherent difference between the sexes in survival power which, however, has not up to the present been satisfactorily explained.

MANNISH OR WOMANISH—SOONER OR
LATER, AND HEAVEN SEND IT
SOONER LEST IT COME TOO LATE,
THE TRUTH MUST BE CON-
FRONTED, AND THE
CRISIS MET

IT IS A QUESTION OF MAN DOING MAN'S WORK,
AND LIVING MAN'S LIFE, AND WOMAN
WOMAN'S

Students of sociology claim that the American people have gone stark staring crazy on busybodyism. That feminism is in the saddle, that molly-coddleism is in the air, that hypocrisy reigns triumphant and that we are careening in a mad flight for the old lady's home.

Napoleon, the greatest judge of human nature the world has ever known, said: That woman was always more or less than man. She was never man's equal. When woman is more than man, she is supreme in the order of creation. There is nought that can vie with her in the power of self-sacrifice, rival her in the stoicism of suffering, equal her in the strength of love, or approach her in the power of endurance of idealism.

Sweetheart, wife, mother; what words on the earthly plane mean more than these? They represent woman in her supremacy. Man knows, admires and respects womanly women. Unfortunately woman is the one who is forgetting. The craving to be giants of industry, to be cold, rigid masters of the operating table, or shrewd resourceful wizards of the law-court have made her ambitious to be on the same plane with man. There she can never be. As Napoleon said, she is ever more or less than he.

Dr. Arabella Kenealy, L. R. C. F., the famous London woman novelist and writer on eugenic and sociological subjects, in a recent work, "Feminism and Self Extinction" (E. P. Dutton & Co.), written purely from a biological standpoint, says: "Biology recognizes no theology except its own, that of evolution."

That feminism, the extremist—and of late years the predominant—of the woman's movement, is masculinism.

It makes for such training and development in woman, of male characteristics, as shall equip her to compete with the male in every department of life—academic, athletic, professional, political, industrial—and it neither recognizes nor admits in her natural aptitudes different from those of men, and fitting her, accordingly, for different functions than these. It rejects all concessions to her womanhood; even to her mother function. It repudiates all privileges for her. Boldly it demands a fair field only and no favors, equal rights, political and social, identical education and training, identical economic opportunities and avocations, and identical morale, personal and public.

Human evolution and progress have resulted absolutely from an opposite trend, in inherence and development, of the two sexes, as regards life and characteristics, aptitude and avocation. The progressive differentiations and specializations of vital processes and living forms, whereby human character and faculty have been increasingly advanced to higher powers, reach their most admirable culmination in the complex division of humanity into two genders; each of which is enabled, by way of such complex specialization to promote, to intensify and to dignify its own allotted order of qualities. To oppose and frustrate this natural dispensation, whereby human development is achieved by the two sexes traveling along diametrically opposite lines of ascent, is to nullify all that civilization has secured, and to transform the impulse of Progress into one of Decadence.

Nature, marvelously prescient in all her processes, has provided that the sexes, by being constituted wholly different in body, brain and bent, do not normally come into rivalry and antagonism in the fulfillment of their respective life roles. Their faculties and functions, being complementary and supplementary (and obviously

best applied, therefore, in different departments of life and labor), men and women are naturally dependent upon one another in every human relation; a dispensation which engenders reciprocal trust, affection and comradeship.

Feminist doctrine and practice menace these most excellent previsions and provisions of nature by thrusting personal rivalries, economic competition and general conflict of interests between the sexes.

The purpose of her book, Dr. Kenealy declares to be, "to dissuade women from exploiting a world's misfortunes for their own immediate profit, and to reconcile them, in their profounder and more vital interests and in those of the race, to surrender freely all the essentially masculine employments into which mischance has cast them."

The Doctor's arguments are based on biological facts. She attacks effectively the impassioned fallacies of feminism and holds up to the world's eyes the glory of mother and womanhood, and the supreme importance of the home and the training of his children.

The Doctor is evidently a woman with a mind of her own, possessing unusual ability and not led astray by hungering publicists and crazy hybrids. While arguing the intricacies of biological evolution she rises to enthusiastic heights with a fervor unsurpassed. In one place she says:

The male cult is impressed now at the earliest age. Some of our hapless little girls, in consequence of having been subjected early to strain of masculine drill, hockey, cricket and other rough and strenuous exertion, are more like colts or smaller-sized bullocks in their crude conformation and ungainly movements, as also in their crude mentality and manners, than they are like charming human maids.

Few developments in life are prettier or more engaging than is a natural little girl. The sex of her, with its fair woman-attributes, reveals itself early in children of high organization. Crowned by her curls, in her simple white frock, she is as fresh and dainty, as winsome and elusive as a fairy. Her little woman-soul begins to make for beauty ere ever she can walk. Ere ever she can walk, she moves her limbs in rhythm of the dance. She tries to sing. She stretches out a tiny finger and reverently touches a bright color, a blue ribbon, a gold button, a pink flower on a chintz. Set her in a field, she runs to cram her hands with daisies. She fills, within the House of Life, an exquisite small niche that nothing else can fill.

Yet now they are cropping her fair curls, are exchanging her white frock for masculine knickers.

They are training her soft limbs and exquisite elastic movements to the hard and rigid action of the soldiers' drill and march, are teaching her to stride her pony that once she sat as prettily and lightly as a bird; are making a hard, boisterous tom-boy of her, with lusty, hairy limbs and uncouth manners; perverting all her natural highly-differentiated delicate attributes and graces to clumsy lower-grade form and activities.

They have robbed her of her doll, whose helplessness and wax perfection fostered sentiments of worship, tenderness and ministry in her. They have given her a whipping-top, which unlike the boy, who pleasures in the skill and mechanism of its handling, she lashes with contorted features and neurotic spitefulness. With characteristic scorn of physical disability, feminism condemns old age as disease or degeneracy, a weakness to be combated with latter-day strenuousness, cloaked by a counterfeit youthfulness, forced exertions (even games) simulated youthful zests and gaieties. Beyond all things, women are exhorted not to allow themselves to "grow old" as their grandmothers did, sitting, comely and tranquil and wise, at their quiet firesides.

Yet the truth is, age is a beautiful phase; in its way as natural, as healthful and as beautiful as are any of the younger seasons. Calm and stately as the snows of nature's winter, as nature's winter shows us, old age does not presage death, because there is no death. . . . Compare such serene-faced, dignified age, cause to all reverence and tenderness, for the mystery and pathos of its wise and tranquil resignation—compare such with the restless, harried, malcontent of modern counsels.

Another excellent paragraph reads:

Feminism, having thrust such disastrous liberty on creatures as eager to grasp as they are unfitted to cope with the dangers thereof, is striving now, by way of women-patrols and police-women, to stem the evil with one hand, while with the other, it continues to open the flood-gates still wider. The only way to stem the evil is to stem it at its source. The home, with the vigilant supervision and guidance of a mother whose duty is publicly recognized and her authority strengthened thereby, whose time and faculties are devoted mainly to the making of home and to the safeguarding and disciplining of the young creatures she has brought into existence, is environment and shelter as indispensable to the impressionable youth of both sexes—but more particularly to the impressionable youth of one, as it is for the rearing of infancy and childhood. Such home-influences reinforced by the strong hand of a father who likewise recognizes his parental responsibilities, are the first of all the rights that matter for young womanhood.

Here is another paragraph of equal value:

The home and the family are the nursery of civic as they are of racial progress. We regard it as a proof of civilization that Law-Courts for Children have been instituted. Yet what a blot it is, in truth, upon both parentage and parenthood that, in our day

of enlightenment, such should have become necessary. So have mother influence and maternal sense of responsibility declined, however, that mothers on all sides openly confess their utter lack of power to control boys and girls just in their 'teens.

An excellent paragraph in Doctor Kenealy's book reads:

Many of our young women have become so de-sexed and masculinized, indeed, and the neuter state so patient in them, that the individual is described (unkindly) no longer as "she" but as "it."

Another paragraph reads:

Women's influence, like that of religion, is most potent when it is indirect and inspirational.

And finally she exclaims in alarm:

Sooner or later, and heaven send it sooner lest it come too late, the truth must be confronted and the crisis met. The further the feminism now threatening our downfall secures footing, however, and more and more diverts the Nation's life resources into merely economic channels, more and more squanders them in abnormal ambitions and output, the more deeply rooted and more desperate will have become the cancer of our national decadence. And incalculably the more difficult and dangerous will be the task of its eradication.

ENDOCRINE DISHARMONY CAUSES THEORISTS, REFORMERS AND UPLIFTERS

Dr. Horace M. Brown of Milwaukee, Wisconsin, the greatest authority in the world on Endocrines and their relation to body function, before the Tri-State District Medical Association, October, 1920, at Waterloo, Iowa, said:

Compulsion (force) as a means of maintenance of the social order is always destructive and its action upon cerebration, through disturbance of endocrino-cerebral balance, destroys its own object by increasing the error of balance; or in other words, by bringing discord into the harmonious functioning of the cerebrum and the endocrines.

Thus the vicious circle completes itself and we find ourselves where we started and without a solution of the problem, except that the law of "experience of the ages" still holds, and in its presence theorists, reformers, uplifters, derailed-menopausics and those who believe that they can make man good by making laws; if their endocrino-cerebral function were in harmonious attunement would cease their ill-considered maunderings, and perhaps retire like Tityrus to rest themselves "beneath the shade of some um-

brageous beech," and leave the world to its solution of its problems by the slow process of the attrition of time and by the accumulation of experience.

CHAUFFEUR WAGE VS. PHYSIC—WHY THE MEDICAL PROFESSION SHOULD ORGANIZE

The following is taken from the payroll of the Municipal Contagious Disease Hospital:

Assistant Medical Superintendent, \$150.00 (with board and lodging).

House Physicians, \$120.00 (with board and lodging).

Ambulance Surgeons, \$120.00 (with one meal).

Bacteriologist (not a medical man), \$175.00 (with board and lodging).

Electrician, \$225.00.

Ambulance Driver, \$150.00 (with one meal).

Ambulance Surgeons are on duty from 8 a. m. to 4:30 p. m. seven days per week.

Above are salaries per month.

The ambulance driver, after a four weeks' course in automobile mechanics and passing a state examination, draws more on the municipal payroll than the physician who spends four years in high school, two years in college, four years in medical school and another year as an interne.

The City of Chicago evidently values the care of its automobiles at a higher rate than the care of the sick who come under the charge of ambulance surgeons.

CONTRACT PRACTICE COMMITTEE,

CHICAGO MEDICAL SOCIETY,

Thomas P. Foley, Chairman.

TEACHING MEDICINE FIFTY YEARS AGO IN ILLINOIS A MARKED CON- TRAST TO PRESENT DAY METHODS

Dr. Norman Bridge in his latest work, "The Marching Years" (which we reviewed exhaustively in our October number), Chapter IX, gives reminiscences of early teaching experience in Chicago that we are confident will be of interest to many Illinoisans. We reproduce the chapter in full.

I began teaching medical students the fall after my graduation, having been appointed Assistant Demon-

strator of Anatomy in my *Alma Mater*. Dr. Woodworth was the Demonstrator, but he hated the business of teaching in the anatomy room—he had asked for my appointment—and I did all that work, none too well, certainly, throughout the college year of 1868-9. The study and attention necessary to this, as well as the doing of it, were of great advantage to me, and the work itself was fascinating. It was during this season that my search for dissecting material occurred, which for a time strained my relations with my late friend Dr. Parkes (as described in this Journal last month).

At the end of the year Dr. Woodworth resigned, and Dr. Thos. Bond was appointed in his place. In that period of my career my ambitions were large. I had hoped to succeed Dr. Woodworth as Demonstrator, but the college authorities evidently knew some of my limitations, and probably felt that in professional Chicago I was a good deal of an experiment—which was true. Bond was a good fellow, older by some years than I, both in age and in the profession; was highly connected socially; was married and becoming established in practice. A year or two later I was a candidate for the chair of *Materia Medica* that was then vacant, and suffered some wholesome grief when it went to another. But the other was my classmate and lifelong friend, Wm. E. Quine, a gentleman of refinement and character, and an orator born. He has had an enviable career as a teacher and physician. He always preferred to lecture didactically, which has seemed curious to me, who have from the beginning preferred the clinical side. No professional brother of his was more glad than I of his early promotion, as none knew better his sterling qualities.

My own disappointments did me good; they taught me that probably I was not yet fit for anything better. There was a new Professor of Anatomy, Dr. Boyd, who had come up from Quincy, Illinois, and he made me his assistant, to help him in dissections and to quiz the class in anatomy. This was a most important work for me; for it led to the discovery of the great educational value and spur to thought, of an intense searching quiz of a class of students; it confirmed in me then a habit of quizzing that continued through all my teaching years, often to the worry but sure benefit of all my students; and usually to my satisfaction—though sometimes to my grief.

In the following year, 1870, Dr. Mary Thompson, who had a little hospital for women and children on the North Side, together with numerous friends of hers—both men and women—determined to establish a Woman's Medical College, since women were not admitted to either of the existing colleges. I was asked to take a chair in its faculty, and selected that of pathology. This relation continued three years with pleasure on my part and apparent satisfaction to the institution. The most attentive, business-like and serious minded medical students I ever taught were women. Women did not then, nor have they since, gone into medicine except with serious purpose.

Men enter it with all shades of purpose, from serious to the most trivial.

In 1872 Rush College decided to have a reorganized and enlarged spring faculty and a full course of instruction for about three months, beginning soon after the Commencement, early in the spring of each year. A less formidable spring course had been going on for some time. I was asked to apply for the chair of the Practice of Medicine, and was told that it would be necessary to lecture competitively before the faculty and students. This I did, and was awarded the place. There was only one other competitor, and to satisfy the faculty we had to lecture two evenings.* I gave the address† at the opening of the next spring course of lectures in the temporary college building "under the sidewalk," and there all our lectures were given until the summer of 1876, inclusive, continuing afterward in the new college building, which was first occupied in the fall of that year.

Thus began an association that has continued to the hour these lines are penned; an association that has brought me into close personal relations with some of the choicest souls in all the world, and has endowed my life with professional, social and spiritual joys that cannot be measured in words.

In 1877 my weekly clinic on general medicine was begun and continued as a permanent institution. I began to teach in the regular winter term in 1882, and taught successively and variously hygiene, pathology, clinical medicine, physical diagnosis and general medicine.‡

From 1873 to 1905, inclusively, I lectured every year except in 1891-2, when I was expatriated to California with tuberculosis. Partially recovered, I came back in the autumn of 1893 and lectured a few weeks. This service was thereafter repeated every fall up to and including 1905. In the beginning of 1906, business interests in Mexico were engrossing my attention very much—interests that I was unwilling to neglect. For that reason the lecturing in the college was not resumed, but my interest in the institution never ceased or lessened.

In 1900 I tendered my resignation as a professor in the college. This step had been long contemplated, as some of my colleagues knew, and had been delayed at their request. But the college had been for two years in affiliation with the University of Chicago, and university methods and smaller classes at lectures had been introduced. The arrangement was apparently working well, the faculty had been augmented and a larger career was ahead for the institution. It seemed to me that I could with good taste and propriety drop

out; so I wrote my letter of resignation without consulting anybody.

The college accepted my resignation by making me Emeritus Professor; and my name was kept on the list with a request to lecture on any subject at any time, as long as I cared to.

It is a safe statement that of all the kinds of work I have ever done, teaching medicine has been the most enjoyable. The didactic teaching was pleasant, but not so much so as the clinical. I would rather give a clinic on medicine—a study of a disease with a case of it before us—to a class of critical, inquiring students, present by their own desire, than do any other piece of work in all my experience.

My habit in didactic lecturing was to spend the first ten minutes of the hour in quizzing a few students on the subject of a previous lecture, making records of their answers, to be used in my final reckoning with them. More or less quizzing was also done regularly in the clinics. It was early discovered that I had an unenviable reputation among the students for severity in these quizzes. The quizzing was not meant to be severe, but only helpful in the process of learning, and especially in the art of close and critical observation. It is, however, true that, when a student's answer needed explanation or elaboration (as evidence that he had not guessed it) he was allowed, by a few kindly questions, to make his case solid.

But the reputation was unpleasant, and would have been more so if it had not been true that this sort of quizzing is one of the most effective methods of teaching, and if, as the years came along, a lot of practicing graduates had not come back to say how much advantage they were conscious of having derived from the quizzing they had received from me while in the college. In the presence of a large class of his fellows, it is small wonder the youth thus interrogated was often embarrassed, especially if he thought he was being cornered. One student who had been dismayed by such an experience said in despair to a seat neighbor: "That man would quiz the devil on sulphur, and corner him."

Nor was my reputation any better in final written examinations. The questions seemed to the students to be very difficult, but they were not. There were never any "catch questions," which are nearly always unfair; but some of the usual half dozen were so framed as to test the capacity of the student to think and reason—they could not be answered by simple remembering. Once a notice appeared on the hall blackboard to the effect that I would give at a certain hour the next day a final examination to the senior class. An hour after the exercise was over a student had written under the notice: "He did give it," underscoring the "did." An hour later, another and less reverent student had written under all, in red chalk, "Yes, you are damned right, he did."

This teaching had to be done in the midst of the exacting demands of a general practice, and sometimes under pressure of official duties for the city of Chicago, which lasted seven years, three on the School

* December 26 and 30, 1872.

† March 5, 1873.

‡ My titles in Rush College were successively: "Lecturer on the Theory and Principles of Medicine" (1873); "Lecturer on the Principles and Practice of Medicine" (1876); "Adjunct Professor of the Principles and Practice of Medicine" (1881); "Professor of Hygiene and Adjunct," etc. (1882); "Professor of Pathology and Adjunct," etc. (1886); "Professor of Clinical Medicine and Physical Diagnosis" (1889); "Professor of Medicine" (1898) (this last was after the affiliation with the University of Chicago); and "Emeritus Professor of Medicine" (1900) (this last after I tried to retire from the college and was not allowed to).

Board and four on the Board of Election Commissioners.

My practice in the early years was extremely small, but was during many of the later years a large one, much of it for the poor, who could pay only small fees or none at all. I once had a colleague who boasted that he never had any non-paying patients on his list—which I told the man he ought to be ashamed to say, if it were true. For every normal-hearted physician unavoidably has people on his list who cannot pay at the time of the services, or ever. My list of such cases was always large. Many of them were people who had employed and paid me in my days of small things, and whom I would serve, pay or no pay; many were struggling people of refinement and worth, caught by material misfortunes, whom it was always a pleasure to serve. For several years many hours of my time each week were given to the poor in the Central Free Dispensary—usually in the presence of students, for whom it was a continuing clinic. Likewise for many years a large amount of time was given to hospital work in the Cook County and the Presbyterian hospitals. This labor was always a pleasure, and valuable for teaching, as well as for equipment professionally—yet it took nervous energy as well as time.

The methods of teaching doctors in the olden time, half a century or more ago, were mostly by didactic lectures nearly an hour long, three or four each day in close succession. There was very little in the way of illustration, things shown or done to aid the memory, except in the chemical laboratory and the anatomy room. It was a monotonous business, tiresome to body and mind—a memory-goading process.*

Two courses of lectures of three or four months each (usually the same lectures repeated) were required for graduation, and the student had to present a letter from a practitioner of medicine, presumably in good standing, to the effect that he had been studying medicine at least three years prior to his graduation. (Sometimes students gave letters from men who themselves had never been graduated from even one of the cheap schools.) Few or no questions were asked of the student, on admission, as to his general education, whether he had attended school, high school or college—or whether he could even read and write. Most of the medical schools were called "proprietary," since their trustees were senior members of the faculty, and any profits derived from fees were divided among the latter.

In many of the medical colleges, so-called, the teaching was less practical than the teaching of trades to apprentices, for these were at least required not only to handle the tools of their craft, but to become by practice expert with them.

As the years came along, clinical studies, clinics in the colleges, and laboratory exercises of many sorts gradually came into vogue in response to a growing public sentiment, a belief, both in the profession and

out of it, that medical education averaged altogether too low. In response to the same influence many of the proprietary schools were gradually driven into union with universities or with other weak colleges, to make stronger ones, and so afford more laboratories and clinical advantages; and more and much better teaching. Many of the weaker schools ceased to exist.

More serious conditions began to be required for admission to medical schools, easy conditions at first, which progressively grew more severe until some college work, largely along scientific lines (usually at least two years of it), came finally to be a fixed requirement in every first-class school in the country.

This progress in medical teaching was hastened by the legislatures of many of the states, which passed laws fixing conditions of admission to practice, some states making them extremely severe. As a result of all this progress, medical incompetence and quackery have been much reduced—but only reduced, not abolished. Perhaps they never can be wholly done away with, owing to the mental tendency on the part of many simple minds to believe in the things that quacks promise, and to think that the prosecution of a professional mountebank is unfair.

Through all the years of improvement in medical teaching, the credit for the progress made is largely due to the teachers themselves—especially the junior teachers, who were more often fired with the progressive spirit—aided by educators in general; they together aroused a wholesome public sentiment that has helped. The progress has been more or less of a fight, because of the several sects of so-called healers who have had little difficulty in convincing some sections of the public, and always some legislators, that the true art of healing comes by intuition to certain persons, or comes direct from God, and not through learning, patient investigation and experience. But there has been some advantage in such opposition, for it has spurred on scientific research and thoroughness to a point that, half a century ago, had not entered the vision of reformers as among the possibilities. This progress has been a greater and more beneficent boon to the people as a whole than they know, or can well know, for it has done two things that are the chief purpose and duty of the profession: It has made attacks of sickness less painful and long; and it has lengthened the average span of human life.

A volume of amusing history could be related of the old time medical schools, and some of it would seem the more curious to those doctors who have no memory of it themselves. Some of the story shows the unsophistication, the mental and spiritual innocence, of the students; some of it reveals their acumen, for they were not fools, if they did come mostly from the farms and shops, with little preliminary schooling; and they sometimes revealed a shrewdness that surprised the classicists.

The experiences of students then were altogether different from those of today. There was a dearth of practical things in the teaching; things for the learners to do in the learning. There was some slight

* Some recent experimental studies have shown that only ten per cent of things taught by words are remembered, while of things perceived by the eye thirty per cent are remembered.

compensation in the differing personalities, ways of saying and doing things, among the several members of the faculty. In the lectures they frequently contradicted each other, teaching somewhat conflicting doctrines, to the confusion of students who had read so little and heard so little of men's opinions on debatable questions as not to know that in medicine there must be many such questions.

The students metaphorically dissected each teacher in his ways, opinions and character. This was a diversion from the monotony of lectures, and it helped. It was especially the case if there was something peculiar about the teacher or his teaching; if he was elegant or awkward, or used good, bad or bizarre language (only many of the students were unable to distinguish between good and bizarre language); or if he told stories and jokes to relieve the tedium of his talk, as one wise and venerable professor in the old Rush College always did.

If there was a large class of young men crowded together in a steep amphitheatre, men who met there day after day and were not dominated by some restraining influence, and if they were kept waiting long for the lecturer to appear, they often broke into song. The favorite was "John Brown's Body," in the familiar tune to which the "Battle Hymn of the Republic" is usually sung. When sung by two hundred or more men it was rather grand music, and it always filled the time, and worked off some surplus energy. But if nobody started the singing, perhaps a couple of fellows sitting back of the first or second row of seats might reach down in front of them and lay hold of some selected victim and lift him bodily, and pass him up to those sitting back of them, who in turn would pass him to others, till he might land on the topmost seat, if he were not specially vigorous or an expert wriggler or scrapper. Sometimes his clothing would be badly torn, and some seats might be broken, but that would not matter to the participants. However normally demure and decorous the men on the successive rows of seats might be, there were nearly always some who could not resist taking a part in the scrimmage the moment it began. The performance was familiarly known as *passing up*.

These things often happened in certain schools, and almost never in others where the conditions were apparently the same, and the reason was not easy to tell. The explanation of them must probably be found in several circumstances. One is the pent-up energy of a lot of young men, sitting still and listening almost continuously for hours each day, and having too little exercise. Another is the lack of things to do by themselves that they must record and be judged by, like work in a laboratory or a hospital. Something must be charged to numbers—large groups take impulsive tangents more often than small ones. Aggravation at a tardy lecturer, and the demoralizing effect on some of idleness, even of short duration, count for something; so may also the presence of a few fellows with no bad motives, but with a spirit of pure mischief, and maybe an itching to display their dar-

ing among their comrades, as egotistic children often do. The very fashion in mischief is a temptation to start some of it, like the fashions in clothes and slang. Dissatisfaction with the school might lead certain minds to do mischief as a protest, while pure love of adventure is always present and must account for a lot of fireworks, first and last.

Some critics insist that lack of preliminary education and want of essential refinement of character must be mostly responsible for the explosions, but this theory is untenable. Hazings and other forms of college lawlessness have occurred in many lands and times, among educated men from the best families rather oftener than otherwise. Indeed, the boys with little schooling, who are poor and struggling for an education, are rather freer from such dangers than their more (or less) fortunate fellows.

We know with more certainty of influences that conspire to orderliness and decorum in college activities, and to the highest efficiency in the business of learning. Some of these are small classes, relative intimacy and nearness of teachers, the presence of women, hard and diversified work, and some outdoor exercise each day. Rush College in the early days had some of the troubles referred to, but never since the affiliation with the University of Chicago, with severer conditions of admission, university methods, small classes, and more intensive work for the students.

To the young lecturer on medicine in a former regime there were many perplexities beside turmoils in his classes. Usually he did not study his own psychology, and he nearly always failed to grasp the psychology of his students. He misjudged the capacity for memory on the part of the men who listened to him. So he usually loaded his discourse with a flood of details that choked the memory of the students and left them with a jumble of indistinct impressions—to grow afterward more indistinct.

In his clarifying maturity he came to know that if a lecture could impress half a dozen points of real value, and if half of them could be remembered, and become a basis for after-reasoning, it was a successful lecture—and that it had no further virtue of being interesting.

NOTE—In our November number we published Chapter VIII, "Getting a Medical Education in Illinois Fifty Years Ago." This chapter proved so popular that we reproduce Chapter IX in this issue.

"The Marching Years," by Norman Bridge, M. D., A. M., LL.D., is published by Duffield & Company, New York. Price \$2.50.

THE PERSONAL ELEMENT AN ESSENTIAL FACTOR IN THE SUCCESSFUL TREATMENT OF PATIENTS

The following is extracted from some remarks by Dr. Arthur Dean Bevan at a conference on Medical Education: "A few weeks ago a man came into my office and said he had been to a great clinic where they practice group medicine in the best possible way. He was an intelligent man. He had been put through

a machine. He said: 'Doctor, I went there, and I was most carefully examined for a week. They x-rayed my teeth; they x-rayed my chest, my stomach and my intestines. They made an examination of my blood; they took what they called a Wassermann test; they made an examination of my feces and of my urine. They made an exhaustive and thorough examination, and when they got through they said: 'Well, Mr. So and So, we cannot find anything wrong with you. You go back home; you are run down; you need to eat more and not work quite so hard.' This man was excited; he pulled out his handkerchief and with a trembling hand wiped the perspiration from his forehead, and remarked: 'Doctor, I have lost fifty pounds, and I am so sick that I cannot do my work.' This man had been through a machine and did not have the benefit of the personal element in medicine. He had a marked exophthalmic goiter without any visible goiter. The diagnosis was made in an instant by a clinician who had personal control of the situation, the minute the man took his handkerchief out of his pocket and wiped his forehead, and said he had lost fifty pounds and could not do his work, the diagnosis was clear. It is in personal element that the art of medicine comes and is something we cannot get away from. Again medicine as a profession in this country is a means whereby about 150,000 men earn a livelihood. Our problem is not a simple one, but I think will be worked out.'—*Jour. Kansas Medical Society*.

WHERE THE RUBBER GLOVE IS BEHIND THE TIMES

Dr. Robert T. Morris of New York, before the American Association of Obstetricians, Gynecologists and Abdominal Surgeons at Atlantic City, N. J., September 20-22, 1920, said that discarding the rubber glove represented one of the best advances of surgery in general. It interfered with the sense of touch in some kinds of work. In abdominal work the rubber glove was not necessary if the hands of the operator were otherwise well prepared. It made a longer incision necessary, and consequently was not in accordance with the principles of modern surgery.

Dr. Herman E. Hayd, of Buffalo, N. Y., said he thought that Dr. Morris had done the profession a great service in teaching them to do surgery through small incisions and to develop tactile sense. He was rather surprised that a man with a judicial mind like Dr. Morris's should have put before the association so strongly the results of the work of Kennedy without the use of rubber gloves. It was hard for him to believe that in ninety-nine per cent of the cases in which other surgeons who wore gloves had operated there were adhesions, while those operators who did

not wear gloves only had seven per cent adhesions. To him this was ridiculous. Out of one hundred cases, probably sixty to seventy-five per cent were the simplest kind of operations and would have taken but a short time to accomplish. He did not believe it was possible that such results could take place in the hands of ninety-nine men with adhesions and Dr. Kennedy had only seven per cent adhesions from operating without gloves.

Dr. Charles L. Bonifield, of Cincinnati, Ohio, could not believe that the rubber glove in and of itself caused adhesions. He could conceive of a man with rubber gloves being rough, and a man without rubber gloves scratching tissues with his finger nails. One thing that induced him at an early age to wear rubber gloves was the fact that his finger nails were very hard to keep clean, and he seldom knew whether he had them clean or not, and he felt it was better to cover them up with something that he could boil. While rubber gloves might impair tactile sense a little, still they should be used in operating.

Dr. Gordon K. Dickinson, of Jersey City, stated that Dr. Morris wanted to standardize surgery by discarding gloves. Why were gloves worn? To prevent infection. Why was infection likely? If one went the rounds of the clinics one would see the most incongruous things perpetrated, such as putting on soap and washing it off again. If one wanted to get his hands free from germs he must not wash the soap off and must not scrape it off. It did not do any good. Put soap on, rub it in, and one would kill the germs, and there was no germicide more potent than potassium soap.

Dr. John W. Keefe, of Providence, R. I., said that a surgeon's tactile sense was not as acute with a rubber glove on as it was without it. When rubber gloves first came into use he used them in nearly all cases in which he operated. Now and then he slipped the rubber gloves off because he thought he could feel better without them. At one time he was in the habit of going to see Dr. McBurney, who was one of the greatest surgeons America had ever produced. He told him about his difficulty, and he said that was exactly where the mistake was made. The rubber gloves should be kept on in a difficult case and the fingers ought to be educated as to how differently things felt with the gloves on. He went home and had practised that ever since.

Dr. James N. West, of New York, said that Dr. Morris had spoken of the great tendency to standardization, with the result that it stifled originality. There were times when the surgeon could operate to greater advantage without the use of gloves than with them, particularly if he was very careful in the preparation of his hands.

Dr. Abraham J. Rongy, of New York, said in a large city like New York it was not only unsafe to operate without gloves, but unsafe to examine patients in the office without gloves, and as a measure of protection the use of gloves was one of the best things for the physician.—*New York Medical Journal*, November 6, 1920.

PRIVATE PRACTICE IN GERMANY IS A THING OF THE PAST, THE STATE HAS VIRTUALLY ASSUMED CON- TROL OF THE PRACTICE OF MEDICINE

It is interesting to note that the German papers are commenting on the attitude of the medical profession in America towards Compulsory Health Insurance.

The medical clinic of Berlin comments on the matter editorially and apparently admits that the system in vogue in Germany has practically reduced to State servitude a former free and independent profession.

It further remarked that negotiations for the renewal of contracts were abruptly broken off when fees of twelve marks for house visits and eight marks for office calls were suggested. At the present depreciated value of the mark, this represents about twenty-five and seventeen cents respectively in American money, and laying aside all questions of the present condition of foreign exchange and the purchasing power of the mark, the real significance of this report lies in the fact that private practice in Germany has become almost a thing of the past, and that the State has virtually assumed control of the practice of medicine. This is precisely the situation that is foreseen and dreaded by physicians in this country, who realize that control by the State of the conditions of practice, means complete loss of independent action. Once the power of assigning a physician's field of activity is placed in the hands of the State and the subsequent steps to compel socialization are easy. How this problem is to be met by American Physicians is by no means clear. One attempt at solution may be recognized in the decision of the New York Police Department to collect funds to both equip and endow a hospital in Brooklyn for policemen and their dependents, a group estimated at some 60,000 persons. The plan suggested calls for a fund of \$5,000,000, of which approximately a half shall be used for endowment and maintenance. No announcement has yet been made as to how the institution shall be manned, nor what the approximate cost of the individual for treatment is likely to be. The idea of voluntary co-operation, which lies at the bottom of this plan, and which could be developed by utilizing the already salaried surgeons of the Police Department, thereby centralizing their work and giving them added efficiency and broader opportunity is worth consideration, as a plan which might be expanded to cover groups of citizens whose incomes are at present inadequate to command the better sort of medical care but whose importance to the community makes it essential that it should be placed within their reach. The scheme of voluntary co-operation is free from many of the drawbacks inherent in plans that are initiated and controlled by the State, and it may be that a

comprehensive plan for voluntary enrollment of groups of citizens under proper financial conditions could be so arranged as to bring about a readjustment of the present field of medical practice without interfering with the opportunities of the physician for normal growth that is inherent in State Socialism.

The objection of thinking physicians to the plans so far brought forward arises from their certain knowledge of two unavoidable results—the fact that the beneficiaries would not receive the improved medical care that is promised and that physicians themselves would tend to sink into mediocrity.—H. G. W., in *Jour. M. S., M. S., Nov., 1920.*

STATE MEDICINE NOT IMPOSSIBLE IN ILLINOIS

Dr. Hugo C. Schroeder, M. D., in *The Madison County Doctor*, says:

Have you recovered from the wallop handed you by the Constitutional Convention? When your Proposal No. 300 came up for action, it was stated on the floor of the convention that this proposition had no backing. This, in spite of the fact that the measure had the backing of the county societies, the state society, and the fact that every doctor in the state was pledged to work for it. Believe me, it was some wallop! Fifty-seven to 9. Think of it. Isn't it about time we wake up? The editor of the *Clinique* says:

"Much is being said and written these days relative to state medicine. Without exception, state medicine is condemned by the busy physician but is condoned, encouraged, and exploited by the swivel-chair doctor, the medical uplifter, and the near doctor and hanger-on of the profession. In other words, the physician who actually lives by his profession, and his own efforts dislikes the idea of state control which he feels would limit his field of action, hamper his independence, and curtail his individuality, while the other type of so-called doctor is looking for a chance to get both feet into the public feed trough and fatten up at public expense."

A number of doctors have remarked, "Why, there's no possible chance of putting over state medicine in Illinois." Let us see if there isn't.

When the Harrison Law was put over we didn't oppose it so that any one could notice it. When we were each taxed \$1.00 a year to administer this law—we paid. When the tax was raised to \$3.00—we paid.

When the Volstead Act was made a part of the law of the land more restrictions were placed on the doctors. Were we consulted? Not that I know of. But the law is there and must be obeyed.

You report your infectious disease, your cases of tuberculosis, your venereal cases. The State Department has ruled that you must do so under penalty of fine or imprisonment, or both. According to the *Illinois Journal* the law has been enforced.

You now have free Venereal Clinics in Illinois under the management of the State Department of Health. You have free Tuberculosis Clinics under the management of the State Department of Health. You

have a free clinic for victims of Infantile Paralysis with 1,600 patients in charge of a physician who travels over the state and looks after these patients. You have a free laboratory under the State Department of Health, which furnishes you free of charge examinations, diagnosis and antitoxin. You have your Community Nurse.

The next proposed step is a paid all time Health Officer for each county and for each city of over 15,000. What more remains but for the State to tell you which patient you must look after, and hand you a monthly check? You say State Medicine is an impossibility in Illinois?

Would it make any difference one way or the other calling attention to the trend of the times? Look at the vote of 57 to 9 and answer for yourselves.

REFORMERS WHO DON'T REFORM

THE USUAL THING

"I am in great distress," stated J. Fuller Gloom. "I have a griping pain in my stomach and a racking ache in my head. My tongue is covered with gray fuzz, and whatever I eat disagrees with me outrageously."

"You should consult Dr. Smart. I am sure he can do something for you."

"No doubt, but I am not as old-fashioned as all that. It used to be the thing to go to a physician, and while he was endeavoring to bring you out of the kinks, bore your friends, acquaintances and even total strangers with all the details of your ailment and minute descriptions of your every symptom. But nowadays when a man gets the stomach-ache he marches in parades, secures a hall at somebody else's expense, denounces everything and attempts to reform everybody but himself."—*Judge*.

UNLAWFUL PRACTICE OF MEDICINE

The Court of Criminal Appeals of Texas, in affirming a judgment of conviction of defendant Black of unlawfully practicing medicine, for which he was fined \$250 and sentenced to one day in jail, says that it was entirely undisputed that he had and maintained offices where he treated any and all persons who might apply to him for various and sundry disorders and diseases, for compensation; and that he had not registered with the district clerk of the county, as required by the provisions of Chapter 6, Title 12, of Vernon's Penal Code. That act, passed by the legislature in 1907, makes it unlawful for any one to practice medicine on human beings in Texas, without registering with the district clerk in the manner and form provided by said act. By the terms of Article 755 of said chapter, what is meant by "practicing medicine," within the proscription of said statute, is defined. Subdivision 2 of that article is: "(2) Or who shall treat, or offer, to treat, any disease or disorder, mental or physical, or any physical deformity or injury, by any system or method or to effect cures thereof, and charge therefor, directly or indirectly, money or other com-

pensation." This act has been held constitutional both by this court and by the Supreme Court of the United States. It has been held to apply to a masseur; also to an osteopath; also to one who claimed to cure by means of laying on the hands and prayer—and this wholly regardless of whether such persons claimed to be physicians and practitioners of medicine or not.—(*Black v. State* (Texas, 216 S. W. R. 181)). *J. M. S. of N. J.*

RADIUM TREATMENT OF X-RAY BURNS

Dr. Daniel T. Quigley, of Omaha, Nebraska, in *Urologic and Cutaneous Review* for October says:

For many years it has been known that radium has a beneficial effect on old chronic x-ray burns and x-ray cancer. At first used in a very cautious manner to avoid the possibility of aggravating the condition, the good results gradually led to more free use of radium for these otherwise hopeless conditions, until at the present time radium is considered practically a specific in x-ray cancer and x-ray ulcer. The good effect of radium treatment is apparent not only in the old chronic case but also in acute x-ray burns and if used in the acute stage a smaller dose will suffice and less tissue will be destroyed. Some of the cases treated by the author have been so extensive that there was no hope of the skin filling in the defect and in these cases skin grafting was done, always with a successful result. These same cases had been repeatedly skin grafted before the use of radium without success.

It is a notable fact that in every case treated many different methods of treatment had been tried before resorting to radium; curetting, skin grafting, skin sliding, washes, salves, ointments, violet rays, etc.; but in no case were these things of the slightest benefit to the patient. On the other hand, these ill advised measures increased the days of suffering and invalidism and contributed to the destruction of tissue and often the mutilation of precious anatomical structures.

It would seem that with the excellent results to be obtained with radium in these cases and the entire lack of favorable results with other methods of treatment, the patient should be advised to seek radium element as soon as it is known that he has been administered an overdose of x-ray.

The physiological effect of radium rays on tissues is entirely different from that of the x-ray.

The x-ray causes chronic ulcers that do not heal and lead to the development of cancer. Radium burns always heal quickly and easily unless there is some constitutional disturbance such as diabetes or nephritis, and there is no tendency to cancer formation.

The rays of x-ray are irritating and poisonous, the rays of radium are benign and healing. In several thousand radium applications covering a period of seven years the author has burned every patient to whom he has applied radium. In using x-ray we would not knowingly burn any patient.

CO-OPERATION A NECESSITY

The medical profession's first need is organization, its highest need is co-operation. During the last ten years the efforts of men have been to perfect a good working organization. A survey of the present situation reveals the fact that these efforts have been eminently successful. While there are still many physicians not members of their county, state or national societies, the progress along these lines has been remarkable. Then we are safe in saying that the first need of the profession has been supplied, organization.

The next step is closer co-operation. Through the medium of our societies we have begun to get acquainted with one another. If this acquaintance leads to anything it should lead to actual efficient co-operation.

We should read the "handwriting on the wall." The night of competition is passing and the day of co-operation is dawning. This is true in every avenue of life—religion, education and commerce. Medicine should not lag behind in her preparation to meet new conditions. No longer can the country doctor work by himself. The demands of modern medical practice make close co-operation an absolute necessity.

The great unsolved problem of efficient medical and surgical service for the middle classes, particularly in the country, remains to be solved. It cannot be solved by individuals, it must be solved by united effort. In times gone by competition has bred jealousy, hatred and misunderstanding, and as a consequence, scientific medicine has not come to her own. Instead we have the popular quack and prosperous patent-medicine vender. The hope of the future lies in co-operation. This is only the next step of our journey toward the time when the physician will be the servant of the state, and financial returns will be entirely eliminated in the treatment of the sick.—*B., in Monthly, Bucks County (Pa.) Medical Society.*

THE CLEVELAND ACADEMY MEDICINE REPORTS SHOWING THE UNFAVORABLE TREND OF THE TIMES IN THINGS MEDICAL

THE FUTURE OF MEDICAL PRACTICE

An important investigation was recently made by a special committee of the Cleveland Academy of Medicine on the subject of the organization and program of the Academy. The report says:

"Only the great medical profession, as widely as it touches public life, has been blind to the desirability of such influential participation in community life and has failed to appreciate that the trend of the times in all other professions, businesses, and trades is toward a policy of assertiveness and aggressiveness in pushing the profession, if not the individual members of it, into the life of the community. That the profession of medicine as now practiced is in danger of being engulfed in 'state medicine,' and that unless the profession is properly forewarned and prepared, the

hospital, the doctor, whether general practitioner, surgeon, specialist or laboratory worker, may become a mere tool of capital, labor, and the politicians are also emphasized.—*Ohio State Med. Jour.*

ANOTHER ATTEMPT TO GET INTO THE PRACTICE OF MEDICINE WITHOUT QUAL- IFYING IN THE REGULAR WAY

CORPORATIONS SHOULD NOT BE ALLOWED PRIVILEGES WITHHELD FROM INDIVIDUALS

The American Red Cross sees in the widening disparity between the increase of our population and the decrease in the number of graduates from medical institutions, an added reason for promoting general training in first aid and accident prevention.

The present standard of pre-medical education has lengthened the time and increased the cost of medical training, thus curtailing to a large extent the yearly attendance at the medical colleges. In 1904 there were 28,142 students attending the various medical colleges of the United States, this being the largest number in any year during the period 1880-1919. The total number of medical students in the schools for the year ending June, 1919, excluding pre-medical, special and post-graduate students, was 13,052. There was a decrease in 1919 of 578 below that of 1918.

In 1906 there were 162 medical colleges in the United States; in 1919 there were only eighty-five recognized medical colleges. In 1903 there were 5,698 graduates from all medical colleges, one graduate for every 14,020 of population. This number has gradually declined, in spite of the increase in population, until, in 1919, there were only 2,656 graduates, a decrease of fourteen below that of 1918—one graduate for each 40,230 people.

Universal first aid training would supplement the work of the physicians, and take from them the burden of caring for unimportant injuries. This would release their services for more serious cases.

MUSIC WITH WORK

Transplanting rice in the Philippines costs about forty centavos a day, with two meals, cigarettes and betel nut, but when music is provided the output of work is increased thirty per cent. It is often a blind man who plays. He sits on the low rice dyke and sings the old folk songs to his guitar, and frequently the workers join in the chorus. Some of the large stores in the States also tried the effect of music, with good results. We have not heard much lately concerning music in hospitals and operating rooms; perhaps the patients were of the same opinion as the Socialist press, which says that all this welfare work is enlightened self-interest. It proceeds without taking the trouble to find out whether such patronizing efforts are desired or appreciated.—*N. Y. M. J.*

STATE MEDICINE A MYTH

DELUDED PEOPLE WHO EXPECT THE STATE TO RELIEVE THEM OF THEIR MEDICAL BILLS AND AT THE SAME TIME GET FREE INSURANCE HAVE A SAD AWAKENING SHOULD THEY EVER INAUGURATE THIS SUPREME FOLLY

Declaring that "a system of state doctors would be even more dangerous than a state religion," an interesting editorial on the above subject recently appeared in *The Akron Beacon Journal*.

It is indeed encouraging to see that a proportion of the public as represented by editorial thought in the lay newspapers, is beginning to realize not only the fallacy but the grave dangers in a state system of social medicine. As several angles of the questions are treated in an interesting fashion, the editorial is here reproduced:

In a recent issue of this paper was an excellent editorial of our contributing editor, Dr. MacAyeal. It stressed the folly of peoples in experimenting with institutions which all human experience has found sound, and it expresses a sad note of inquiry as to whether the human race will ever see the folly of tearing down the things for which man has yet found no substitute. This is peculiarly true just now in all countries, nor is it lacking in our own. Despite the failures of a thousand years there is everywhere prevalent a tendency to call back to power the old absolutism of the state and to have it take over the endeavors of the individual. In other words the disordered war psychology has turned its back upon the lessons of history and once more wants to get back to the idea that the state should do all things. Nor does this idea prevail only in regard to industrial life but it includes all of the fields of human endeavor.

Nowhere, perhaps, is this better seen than in the new craze that the state should not only take over our possessions but also the care of our bodies. There are now two bills before congress the object of which is to have the United States take final possession of its subjects in all that pertains to health and bodily welfare. A like bill was before the last session of the Ohio legislature. The net idea in these bills is to inaugurate a system of state insurance which shall extend from the babe in arms to the senile ready for the grave. The state is to pay the bills, of course, out of money taken from the pocket of the taxpayer. It is to have state medical examination and inspection which in reality means the state is also to take over the doctors. Under this benevolent scheme the disciples of Galen would in time forfeit their proud estate and become in fact so many state plumbers and joiners and testers of humanity. It will pay us to consider the two inevitable results of such a system. Medical science in America leads the world because of the rewards that are offered to the man who by study and work becomes proficient in his profession. A Crile or a Mayo not only become world benefactors, but fame, money, and social prestige all await them as a fitting reward. Does any one

suppose that Flexner and the long list of his fellow discoverers would have been increased had the state reduced them to the position of inspectors and human plumbers? Deny any man, even a scientist, the hope of an adequate reward for his labors and at once is removed pretty nearly all incentive to his labor. During the French revolution the state took over medicine as well as other things, and it was a notorious fact that the profession of medicine sank to a painfully low level even during those few years. Russia is trying to do the same thing now and we have it on good authority that the reputable doctors are escaping to other lands as fast as they can get away. It never has been nor could it be otherwise.

But the deluded people who expect the state to relieve them of their medical bills and at the same time to get free insurance have a sad awakening before them should they ever inaugurate this supreme folly. It was exactly this idea the present administration had in mind when it inaugurated soldier insurance. It forthwith inaugurated and set up a publication the purpose of which was to plant in the public mind the idea that the government could insure everybody for only a fraction of what they had to pay to the old line companies. There is now a deficit of two hundred and eighty millions of dollars in operating expenses although soldier insurance has in two years declined from over forty to less than seven billions. This deficit, of course, the people pay. It comes back to them in taxes and high costs all along the line. And yet this is only a foretaste of what would happen were any of these bills to pass which would set up in this country a system of state insurance and consequently a state control of doctors. However, it is only a part of the prevailing hysteria to turn the state for not only all things material but likewise for spiritual and moral guidance. It is, in fact, the most dangerous symptom of the times, and it is time for our people to stop and do some serious thinking. It will be a national calamity every time we concede to the state any more power or give it control of any line of human endeavor, for it already has vastly more power and more widely extended control now than it was ever intended to exercise. But should we go to state medicine and state control of the physical well being of the people that event will mark a calamity which in its far reaching consequences will be irreparable. A state religion would not be more dangerous than a system of state doctors.—*Ohio Medical Journal*, Nov. 1920.

THE POWER OF THE LIVER TO FIX GLUCOSE IN DIABETES

Paulesco shows that in diabetes of pancreatic origin the power of the liver to fix glucose in the form of glycogen was diminished but not destroyed. The power of muscle to fix glucose was not diminished. The incapacity is relative and is a consequence and not a cause of diabetes.—*C. R. Sec. Biologie*, April 24, 1920.

THE DIAGNOSIS OF MALARIA BY ADRENALIN

Dazzi gave injections of adrenalin 0.001 to 20 cases which had not shown any clinical evidence of malaria for some time. Twelve of these cases had no parasites in the blood and in eight cases they only appeared very rarely. The temperature was taken every four hours. There was never any rise of temperature but in all cases malarial parasites appeared in the blood in 20 minutes after the injection of the adrenalin. In 24 hours the maximum was reached and then they began to disappear. In each case the size of the enlarged spleen was temporarily reduced as though its hyperemic content had been squeezed out.—*Il Policlinico, Nov. 3, 1919.*

TIME OF OVULATION

Watrin and Hamant have examined macroscopically and microscopically 135 healthy ovaries removed at operation from patients in whom menstruation was known to be regular and who were classified according to the period intervening between operation and the next expected menstruation. The authors conclude that ovulation takes place at a fixed time twelve or fourteen days before the beginning of menstruation. At the time when the menstrual flow appears the corpus luteum has attained its maximum development, at the end of menstruation its long diameter is 16 mm., five days after the end of menstruation less than 7 mm. Watrin and Hamant believe with Fraenkel, Ancel and Bowin, and Villemin, that the corpus luteum by means of its internal secretion, determines menstruation.—*B. M. J. July 17, 1920. Abs. from Rev. Med. de l'Esr, Mai, 1920.*

WHAT ARE VITAMINES?—BEST DESCRIBED BY WHAT THEY DO

"What are vitamins?"

This is a question asked repeatedly since the importance of these compounds in foods has come into prominence, but no definite answer has yet been given. Investigations by scientists at universities, agricultural experiment stations and institutions for medical research have revealed much information regarding the function of vitamins in body maintenance and building, and the parts of the various foods in which they are to be found.

That vitamins are compounds absolutely essential in the food, in order to maintain the weight of the body and produce growth, has been definitely proved. The lack of vitamins causes deficiency diseases, so named because they are due to lack of something in the diet. Vitamins are present and are needed in such small quantities in the food that chemists have not yet been able to isolate them from the many other compounds which are in foods. For this reason, we know very little of the actual character of vitamins.

THREE TYPES OF VITAMINES

According to a statement by Dr. Carl O. Johns, in charge of nutrition work in the Bureau of Chemistry, U. S. Department of Agriculture, vitamins have been classified into three different types, depending upon the functions which they have in promoting well-being and growth.

The first type is known as water-soluble vitamins, and these are necessary in order to obtain growth from food. Lack of these causes beri-beri, which manifests itself by disease of the nervous system and by other symptoms. These vitamins are found in seeds, in green plants, in certain bulbs and fleshy roots and fruits, and in milk and eggs, as well as in certain organs in the animal body. The seeds referred to include beans, nuts and the various cereal grains. When cereals are very highly milled in order to obtain a very fine white flour, a large part of the vitamins may be removed. Vitamins are also lost when rice is polished in order to remove the outer layers which contain most of the vitamins. It is for this reason that a diet consisting mainly of polished rice may cause beri-beri, while unpolished rice does not cause this disease.

FAT-SOLUBLE VITAMINES

The second type is known as fat-soluble vitamins, and these are found in butter, eggs, milk and in certain animal organs such as the heart, kidneys and liver, and to some extent in other fats as well as in green vegetables. They also exist in smaller quantities in certain seeds. When fat-soluble vitamins are absent from the diet animals and man are subject to a disease of the eyes, which appears to be related to xerophthalmia and which, if prolonged, may produce blindness.

The third type is known as antiscorbutic vitamins—that is, those which prevent scurvy, which manifests itself by disease of the bones as well as in other ways. These vitamins are found in oranges, grapefruit, lemons and other citrus fruits, and in green vegetables such as tomatoes, spinach and lettuce, and in eggs and raw milk. The drying of vegetables frequently destroys the activity of the antiscorbutic vitamins. The best source of vitamins is in the leafy parts of vegetables, and this is one of the reasons why spinach, lettuce and cabbage are valuable foods.—U. S. Department of Agriculture, Division of Publications.

CITY DOES NOT IMPLIEDLY WARRANT PURITY OF WATER SUPPLY

The New York Appellate Division holds that, where the charter of a municipality provided for the maintenance of a waterworks system, either by general taxation or assessment on the property supplied, the city, though it collected water rates, cannot be deemed engaged in the selling of water, in the ordinary use of the term. Assuming, however, that the municipality is a seller of water, it is held that where

it furnished contaminated water and one using it became inoculated with typhoid fever, the municipality is not liable for breach of implied warranty to furnish pure water, in view of the New York Personal Property Law, Section 96, which provides that there is no implied warranty or condition as to quality or fitness for any particular purpose of goods sold, except where the buyer makes known to the seller the particular purpose for which the goods are required, and it appears that the buyer relies on the seller's skill and judgment. The soil through or over which the water passes cannot be minutely examined; contamination of the water can be restricted, but not prevented; inspection alone will not reveal the presence of bacteria; analyses of the great volume of moving water collected in the ponds for distribution cannot be made; and an inspection, an examination, or an analysis of every drop of water furnished is beyond the power of the seller.—*Canavan v. City of Mechanicsville*, 180 N. Y. Supp. 62.

SIR MALCOLM MORRIS OF ENGLAND SAYS:

The medical profession of Great Britain finally realizes the necessity for thorough organization. In fact, it has become a question of self defense.

LONDON, August 6, 1920.—First Annual Meeting of the Federation of Medical and Allied Societies.—Sir Malcolm Morris presided over the first annual general meeting of the Federation, which was held in London on July 25 last. After the report of the executive council had been read, Sir Malcolm Morris gave his presidential address and said in part that the need for such a Federation could be deduced only too easily from the experience of the last few years. Was it possible to maintain that when questions affecting the welfare of the great body of medical men had been before Parliament the profession had been able to pull its full weight? Was it so, for example, when the health insurance system was being framed? Certainly it was not. Who that cared supremely for the highest interests of the profession—and among these highest interests he ranked its good repute—could look back upon the stormy events of those days without some sense of humiliation? The chaffering in public into which the profession was forced was only too well calculated to give the impression that medical men were thinking very much of their material interests and very little of the nation's welfare. Had there been in existence such a body as the Federation was fast growing to be, how different would have been the beginnings of health insurance. The Government would have known at the outset that it had to reckon with a Federation through which were able to speak not only the doctors, but also pharmaceutical chemists, who were immediately concerned, and related bodies which had no material interests at stake to deflect their judgment. How could the deliberate conclusions of such a Federation have failed to carry weight with the Government, and with that public opinion which was the final court

of appeal? The need for federation was deducible not less plainly from the multiplicity of existing organizations. That there were some 200 separate medical bodies certainly showed that the profession was not lacking in the organizing faculty. But was it not evident that the effect of all this organizing energy would be vastly strengthened if these bodies were leagued together? They were influential in very different degree. But were they all federated, the most powerful would have their influence increased tenfold; the least powerful would have their influence increased a hundredfold. With regard to politics, the speaker said that it could not be too often insisted upon that the Federation knew no party politics. To say that it knew no politics would be absurd, for the most important of its objects was to take political action at every possible opportunity. But it gave its support, its active and influential support, to Lieutenant-Colonel F. E. Freemantle, who was elected as Coalition Unionist, and to another member of the profession, Dr. Dunstan, who stood as a Labor candidate. And every medical member but one of the legislature except Dr. Addison, whose office debarred him from formal association with a movement with which he had none the less avowed his sympathy, including Lord Dawson, who could speak for the profession in the House of Lords, belonged to the Federation. The medical members of the House of Commons now numbered ten, and it was known that they were only the advance guard. Before long, with the active backing of the Federation, their numbers would be multiplied, and the time was at hand, on all questions affecting health interests, the Whips would have to reckon with a solid phalanx of medical men who would be able to speak with one voice on public health, however much they might differ on other questions. If any Government starved the Public Health Service they must cry "Hands off," and a powerful medical group in the House of Commons would be a bulwark. Behind it would stand the Federation. No longer would it be a "grave defect in medical organization," to use Dr. Addison's words, that there should be "no body of men in the profession who could be appealed to for judgment on a great public issue." Such a body the Federation was destined to become. That the system known as State medicine would undergo much further development was inevitable. The profession had no alternative but to adapt itself to the nation's needs, whatever form the adaptation might take. That task would require more statesmanship than was to be found in any one of the existing medical organizations, be it never so powerful. It was an enterprise which would tax to the uttermost the statesmanship of the whole profession. If that were so, how could any medical society or association be justified in withholding whatever contributions it could make to the common stock?

It would seem that the medical profession of Great Britain has finally realized the necessity for thorough organization. In fact, it has become a question of self-defense. The allied societies of the country are

splendidly organized, and unless the medical men are strong enough to resist them, these societies will simply dictate terms to them. As Sir Malcolm Morris truly said, the Health Insurance Bill should open the eyes of medical men to what is before them unless they are in a position to fight for their rights. At present they are almost politically impotent and to a great extent at the mercy of self-seeking, self-serving politicians who are more than ever firmly convinced that vox populi is indeed vox dei. Of course, it is obvious that the character of medical practice is changing and that it is useless for doctors to kick against the pricks. They must adapt themselves to circumstances so long as these are not wholly opposed to the dignity of the profession and their interests. They must give and take, but must not allow themselves to be merely so many pawns in a bureaucratic system and in which public and individual health play but subsidiary parts. The only way in which the profession can assert itself is by union and organization. It only requires political power to protect itself and to lead in health matters rather than to be led or driven by those whose object is not so much the conservation of health as the consummation of their own political ambitions.

—*London Letter, Medical Record*, September 4, 1920.

Correspondence

WHY NOT LIST THE PLUMBERS IN
PANELS AND MAKE THEM SERVE
THE PEOPLE AT THE RATE OF 25
CENTS AN HOUR AND BE SUB-
JECT TO CALL AT ANY
HOUR DAY OR NIGHT?

SUPPOSE SOMEONE TRIED TO PLACE THIS PROP-
OSITION BEFORE A MEETING OF A PLUMBERS'
UNION. HE WOULD PROMPTLY LAND INTO
A HOSPITAL OR MORGUE. WHY? BE-
CAUSE THE PLUMBERS ARE
ORGANIZED.

Chicago, Ill., Nov. 14, 1920.

To the Editor: By a slight stretch of the imagination the police powers of the State of Illinois could be construed to cover entirely the subject of plumbing. Plumbing is a necessity of most people of the state, and their health depends upon it in no small measure. Why should there not be a compulsory plumbing insurance law with tax levied both upon owners and tenants to maintain healthful plumbing? As the state licenses the plumbers why should they not be listed in panels and made to serve the people at a rate of 25 cents an hour and be subject to call at any hour of the day or night

when their services are called for by the taxpayers.

Suppose some speaker tried to place this proposition before a meeting of a plumbers' union. I think he would soon land in a hospital or a morgue. Why? Because the plumbers are organized. They have no high-brows and no low-brows. They are all of the same brow. They have no Super-college of American Plumbers. They do not spend any time at their meetings discussing the most artistic method of wiping a joint or connecting a sewer pipe. If any body of capitalists or philanthropists tried to put over a compulsory plumbing insurance law they would fight politically and physically, and if the law got on the books there would be the most beautiful strike anyone ever saw. No plumbing would be done except by the plumber for his own family or that of a fellow plumber and the rest of us could go and hang ourselves. The plumbers through their associations with other labor bodies would have an easier time to defeat a public plumbing insurance law because the milk drivers' and carpenters' and machinists' unions would see which way the wind was turning in regard to their own work.

In order to prevent this public health insurance from being put over in the State of Illinois we have got to inform the electorate. We must show the people that we have truth and justice on our side. Women have more to say about what physician shall be called than do the men of the family. Now that she has the ballot she must realize what such a law would mean to her. Take the woman who has had the same physician deliver her three children. How would she like to have to take some unknown doctor deliver the fourth because he was on the panel in her district? The family doctor knows the inmost details of the family life, the sad and the sordid things, not as a matter of gossip, but because they are necessary to a diagnosis or because the patient must have someone to tell. How would these patients like to have to tell these torturing things anew to every doctor on the panel.

Here is a field for women physicians to address meetings of women and talk to them as only a woman can upon this proposed, pernicious law. If the law were bad only for the doctors, it might please some minds to say, "Let the doctors worry," and take a delight in favoring a law just to see us suffer. But they must be shown that

what is bad for the doctors will be bad for them. What kind of plumbing would we get, if we got any, under a public plumbing insurance law? What kind of service do we get from anybody that is miserably underpaid? But the proposed public health insurance can be shown to the average person to be bad for the sick woman, the croupy baby and the rheumatic man.

The financial interests, in spite of the poor fees paid to physicians, have been hard hit by the workingmen's compensation law, and they seek to unload the burden on the taxpayers, the working men and the doctors. These interests say that we doctors are the lowest, necessary menials of industrialism. We say that we belong to a high and noble profession. Perhaps we need a traveler from Mars to tell the medical profession just where it belongs. Not having such a judge who must decide the case? The people of the State of Illinois will have to decide and they must be educated through propaganda.

Yours sincerely,

E. P. S. MILLER, M. D.

DOCTOR HUGH CABOT RAPS STATE MEDICINE — COMPULSORY HEALTH INSURANCE AND ALLIED SCHEMES. THE MEDICAL STUDENT'S IMPRESSION OF THE ECONOMIC OUTLOOK.

DR. CABOT DOES NOT REGARD THE WORKINGMAN'S COMPENSATION LAW AS A NINTH WONDER OF THE WORLD. HE IS QUITE SURE THAT COMPETITION IN MEDICINE AS A BUSINESS MAKES FOR THE GREATEST GOOD, THE BEST SERVICE AND THE MOST MARKED EFFICIENCY.

The following letter from an Ann Arbor medical student shows how the present-day trend of medical economics is causing alarm among the student body:

Ann Arbor, Mich., Nov. 20, 1920.

To the Editor: Your editorial in the November issue on the betrayal of the medical profession has set a number of tongues wagging and a number of brains thinking (if that be possible) in this little old home town of Dr. V. C. Vaughan, dean of the medical department of the University of Michigan. Ancient history is being dug up

and there is talk of how once upon a time a learned professor is said to have given P. T. Barnum a testimonial to the effect "that his White Elephant was the simon pure article; that the white was skin deep and not just painted over," as later in the life of the elephant it was proved to be.

Some of the caustic youths are wondering if history is about to repeat itself and that the testimonials to the efficacy of compulsory health insurance, state medicine, community health centers and all the other brands of uplift may not in time prove to have been as reliable as that given to Barnum's white elephant.

While Dean Vaughan seems to be willing to go sled length in putting the practicing physician off the map, Dr. Cabot, formerly of Boston and the world at large, is sending out feelers. Vaughan does not hesitate to say that curative medicine does not cure, but the scholarly Cabot wants it to make more and better cures and he makes it very *obvious* and very *clear* to use two of his favorite words, that he has no use for compulsory health insurance and state medicine as defined by others; that he does not regard the Workingmen's Compensation Law as a ninth wonder of the world and that he is quite sure that competition in medicine as in business makes for the greatest good, the best service and the most marked efficiency.

While Dean Vaughan is making the rounds of the country working up aid and sympathy for his brand of state medicine, Dr. Cabot is accepting invitations to tell what he believes will cure all the evils that flesh is heir to or has achieved.

Just the same, Hugh Cabot has convictions and in a speech made last week, he said things right out in meeting. Speaking of the Workingmen's Compensation Law, he said the men were not being given the treatment they should be given in far too many cases. He cited an instance of how a boy came to him with a crushed hand—he told how he worked to give back to the lad a good working member—how day after day he gave time and thought to the case and, when he had done what in his judgment was \$2,000 worth of work, he sent in a bill for twenty-five dollars and it was promptly returned as being too much. And, added Dr. Cabot quietly, I refused to do any more of that work. It would have done that man Foley, who is fighting the

insurance companies cutting down of physicians' fees a heap of good to have heard Cabot's statement. Then again, this scion of Plymouth Rock took a fall out of the smug conceit of our state-trained army and navy medical corps. Dr. Cabot was very polite in saying that in his four years spent abroad during the war, he had not come in contact with the American Medical Corps, but reading between the lines, the student could be very sure that Dr. Cabot was not making any exceptions.

He said that his work had brought him in close contact with the medical corps of the English and French for a long period of the war and with the Italian for a shorter period. He found that men who were sure of their pay and their promotion were very much more apt to be efficient and painstaking *in report making than in taking care of their patients*. The speaker said something about its being all right, "if it was short of murder," but I did not get the sentence as it was an aside. Since this was a concrete example of state medicine, it did not meet with the approval of Dr. Cabot. One could deduce from his remarks that it was not only inefficient, but that the personal equation—the intimate relations between patient and medical adviser—the interest of the physician to achieve results—his work to bring back health and strength to the sick was in most cases absent.

Of compulsory health insurance and state medicine, Dr. Cabot expressed the opinion that either put in force would spell financial bankruptcy to any state or nation putting into effect the bills which have been introduced in this country. He insisted that it was not a question of the *duty* of the state (which a special brand of uplifters claim), but that it was a *problem* of the state and a problem which we are a long way from solving. He made it very clear and very obvious that when you cut out competition in the human equation, you make for indifference, ease-taking and kindred ills. That to hire, and if necessary, fire all the physicians by the state, would bring a condition which he did not care to contemplate socially, medically or financially.

But he felt that something ought to be done. The doctors were leaving the small towns and the rural districts and he, for one, didn't blame them. Here we are educating boys to depend on laboratories, x-ray artists, etc., for their diagnosis and,

naturally, when a man finds himself without any of his medical props, he is going to be very indignant. (I am saying that, not Dr. Cabot). In the old days, a surgeon would find himself in the country and be asked to see a case; it might turn out to be, say, a mastoid, but if the physician did not have a trained nurse and a trained anesthetist, and an x-ray machine operator, and a laboratory to finish up what remained of the diagnosis, did he say, gentlemen, I regret to report that in justice to myself and my personal reputation, I cannot do anything for this case. He did not. He improvised an operating table. He took the tools available, if only an ordinary hammer and chisel, and he made a good job as many a patient can testify, for they lived long, in comfort and in good health and what can the best equipped operator do more than that? But nowadays, as Dr. Cabot admits, you are turning out physicians and surgeons taught to walk with crutches. Take away their favorite nurse, their special anesthetist, et al., and they are lost and blame the results obtained, not on their lack of what shall we say, skill, but on the character of the crutches. (Again, I am saying this, not quoting Dr. Cabot.)

After hearing Dr. Cabot, one wondered if the fault lay not in the student, but in the methods by which he was being taught. At any rate, that is the way a bunch of us argued on the car going home.

But to proceed: Dr. Cabot thought the remedy for all the medical ills lies in making community health centers. This plan was not very clear in Dr. Cabot's mind. It was to be the center of all medical activities in a county. The county was to pay the bills, with possibly later help from the state. It would preferably be in charge of a woman, because women have proved that they are the best go-betweens the physician and the patient. Just why the go-between is needed, not stated. Then theoretically (my word), the hospital shall be open to *every* physician in that community, but practically it will be open to such physicians only as fill the bill or as Dr. Cabot said come up to the standards, however high that standard may be placed, fixed by the board of directors. This community center is to have laboratory chiefs, bacteriological chiefs, anesthetist experts, x-ray experts and, above all, a hospital. Dr. Cabot was absolutely silent on

who was to appoint these boards of directors for the community hospitals. He was absolutely silent as to how a county could stand up under such a staggering array of experts who would all expect salaries, commensurate with their titles—he did not go into detail as to how the practicing physicians would prove their ability to reach the high standard required—whether it was to mean the diploma of certain medical schools—the actual proof of their ability by end results, and he was equally silent on who was to fix this standard—whether it was to be the lady director or the board of directors. “What did you make out Uncle Hugh was driving at,” asked one medic. “Driving at, you goat? why the University of Michigan is to furnish the ideals, the standards, possibly the lady directors, but you can bet your little old life that the University of Michigan medical staff will furnish all the nice, juicy consulting fees to those community centers,” said a senior. And the people of the community, the physicians who must pay their taxes like little men, to pay not only the salaries of the professors of the University of Michigan, but pay for the hospital, out of which he may be shut and the patient who must take what is given him, if his chosen physician does not meet with the approval of the standard, must foot the bill, what about them? “Say, boys,” interjected a freshman, “don’t you think Uncle Hugh has forgotten that once upon a time there was a Boston Tea party on account of taxation without representation?”

When Dr. Cabot had finished his talk, he was asked if this plan had been put in force anywhere. The doctor was tickled to death that he had been asked that question. Why, he had gone over to Chicago just last week to meet a Dr. Sampson, who had put the scheme on the map in Iowa. And that map is no slang phrase, either, for Dr. Cabot said that Dr. Sampson had the most beautiful and the most wonderful maps of the community centers; that the *very maps* had converted Dr. Cabot to the scheme, although he admitted that he hadn’t had time to go himself to see how this plan worked off the maps as well as on. He suggested that any hearer might take a trip to Iowa (name of place not given) and see Dr. Sampson.

Well, when Dr. Cabot finished, a voice was heard from the rear of the room. It was a big voice and a long, lanky middle westerner who

owned it. His name was Dr. Kennedy, said to be chief of staff of Grace Hospital. He admitted that he had come to the meeting with what the vulgar might term “blood in his eye,” if approval was to be given to compulsory health insurance, state medicine and other alleged duties of the state, but by calling it a “problem” of the state, the Pilgrim father had taken all the fight out of the western Indian. That word problem was a pipe of peace. Dr. Kennedy roughly sketched the history of compulsory health insurance; showed what Old Otto, Prince von Bismarck had up his sleeve, when he worked it off on the German empire; paid his compliments to the type who would socialize medicine and make of it a battering ram to socialize every thing else in the world; drew a picture of the sacred relations between patient and physician and then served notice, in no uncertain terms, that the physicians of Michigan were by nature peaceful; that in this vicinity all injuns were good injuns, not just the dead ones, and that, if war was to be declared on the profession, war paint and feathers were still on hand; that tomahawks could be sharpened and that the spirit of old Pontiac and Tecumseh and all the gay boys of old were prepared to make one last grand fight before going to the happy hunting grounds.

And that is why the medics and the prospective medics of the old Campus are wondering where they are at, and whether medicine is going to be one grand sweet song, of state paid, state regulated medicine, with the prizes going to the best wire puller, or if it is going to be a battle of free men where the fittest shall survive. I wonder what the fellows in the other colleges are thinking. Can’t you get the under grad. to take a hand in what is to him of vital importance?

R.

ST. LOUIS UNIVERSITY SEEKS FUNDS

To the Editor: St. Louis University, the oldest seat of learning west of the Mississippi River, has for the first time in its more than a century of endeavor made a public appeal for funds, the larger portion of which are to be applied to the support of the Colleges of Medicine and Dentistry. The University has asked its alumni and friends to raise the sum of \$3,000,000 as a Centennial Endowment Fund, in commemoration of

the 100th anniversary of the founding of the institution. The anniversary occurred in 1918, but because of our war conditions existing at that time, with over 3,000 of the undergraduates and alumni of the University having answered the call to arms, the celebration was postponed until conditions were more nearly normal.

GEO. L. McFARLANE,

Publicity Department, St. Louis University,
St. Louis, Missouri.

Public Health

COOPERATION IN ILLINOIS TUBERCULOSIS WORK

The annual meeting of the Illinois Tuberculosis Association, held in Springfield on Friday and Saturday, November 19 and 20, was the center for discussion of the cooperative work between the State Department of Health and the Illinois Tuberculosis Association, recognized throughout the United States as being the best existing example of the cooperation of governmental and extra-governmental health agencies.

The Illinois Tuberculosis Association expended considerably over \$100,000 during 1920 in tuberculosis work throughout the state. As the result of the activities of the Association, \$1,800,000 of public funds have been appropriated for tuberculosis work by counties and municipalities during the past two years.

DIET LISTS FOR INFANTS AND CHILDREN

The Division of Child Hygiene and Public Health Nursing of the State Department of Health has just published a twelve-page circular, including approved diet lists for infants and children.

This pamphlet includes a table of weights and measures from normal children and other valuable tables relative to food constituents.

Copies of the circular in reasonable numbers will be supplied without charge to physicians, child welfare organizations, Parent-Teachers' Associations and other agencies in Illinois, on application to Dr. C. St. Clair Drake, Director of Public Health, Springfield, Illinois.

ANNUAL HEALTH REPORT

The annual report of the State Department of Health for the fiscal year ending June 30, 1920, is now practically completed and ready for the printer. In common with other departments of the state government under the Civil Administrative Code, the prompt publication of the annual

report is regarded as a matter of very definite importance so that the public may be constantly advised as to all governmental activities. The annual report of the State Department of Health, however, is necessarily delayed for several months after the conclusion of the fiscal year, on account of the large amount of statistical data contained. The reports of births and deaths occasion necessary delays, both in their collection, compilation and interpretation. It is expected that the complete report of the various state departments will be issued by January first.

VENEREAL DISEASES IN ILLINOIS

The Division of Social Hygiene of the State Department of Health received reports of 31,876 cases of venereal disease during the year ending June 30, 1920, as compared with reports of 16,915 cases for the year ending June 30, 1919. Of the reports received during 1920, only 6,910 gave information sufficiently complete for tabulation. Of this number, 3,702 patients were between the ages of 20 and 30; 1,284 between the ages of 16 and 20; 1,178 between 30 and 40; 437 between 40 and 50, and 173 over 50. Eighty-three were between the ages of 12 and 16, and 53 under 12.

Males numbered 5,429 and females 1,481. Whites numbered 6,182 and negroes 728. As to social condition, 429 were single; 2,073 married; 325 widowed and 222 divorced.

INCREASED WORK FOR DIAGNOSTIC LABORATORIES

The Division of Diagnostic Laboratories of the State Department of Health has completed a tabulation of work done during the year ending June 30, 1920, showing that 31,494 specimens were examined during the year. This is also three times as many specimens as have ever been examined in a single year by the Division. The number examined last year was 12,003.

Of the 31,404 specimens examined, 13,139 were Wassermann tests; 6,296 sputum examinations for tubercle bacilli; 5,276 swabs for diphtheria; 1,529 Widal's; 1,516 para-typhoid A and 1,532 para-typhoid B, for typhoid and para-typhoid. There were 1,468 smears for gonococci; 263 specimens for the detection of meningococci; 73 blood specimens for the detection of malaria and 529 miscellaneous specimens.

COMMUNICABLE DISEASES IN ILLINOIS

Throughout a large portion of Illinois, particularly in the southern section of the state, there is at this time an unusual prevalence of diphtheria for the most part of a mild type, but spreading to such an extent as to cause grave concern.

Diphtheria epidemics have prevailed at Germantown, Clinton county; Monticello, Piatt county;

Odin, Marion county; Sims, Wayne county, and Petty township, Lawrence county.

While not prevalent to an alarming extent, several outbreaks of smallpox have been reported during the past month at Virginia, Cass county; Augusta, Hancock county; Buffalo township and Polo, Ogle county.

About one hundred cases of scarlet fever have been reported at Springfield and there has been an outbreak of the disease at East Peoria.

PUBLIC HEALTH NOTES

The Division of Social Hygiene of the State Department of Health is arranging the itinerary for a lecturer before county medical societies who will present two new motion pictures, one the "Diagnosis and Treatment of Syphilis" and the other "Gonorrhea in the Male."

At the November election, special taxes for the use of county tuberculosis sanatoria were voted in Christian and Will counties, and the proposition of establishing a county sanatorium was passed in five other counties in the state. Champaign county made an appropriation of \$90,000; Douglas county, \$60,000, and Kane county, \$150,000.

Society Proceedings

ADAMS COUNTY

OCTOBER MEETING

The Adams County Medical Society was in the active stage on October 11, 1920, and there isn't any reason why this should not be true the second Monday of every month. If Dr. John Lincoln Porter could only realize or know how long it had been since our society members came out in such large numbers, he would come more frequently. Of course, we know he was the cause of so many being present, both at the clinic and at the evening meeting and we feel proud to have extended this courtesy to him. The doctors always make an effort to be on hand when they know Doctor Porter is coming.

As usual the morning clinic, which began about 9:30, was large and it was necessary to have some patients wait until after lunch, which was served at the Country Club and also well patronized.

At the evening session the doctor gave a talk on "Painful Backs." He gave the symptoms, pathology and differential diagnosis of:

- (1) Tuberculosis of the Spine,
- (2) Osteoarthritis of Spine,
- (3) Carcinoma of Spine,
- (4) Traumatic Spine.

In the discussion that followed, many interesting points were brought out. Before adjourning, Dr. Porter was given a sincere vote of thanks, and an

invitation was extended to him to visit the society in the very near future.

In order to give our guest as much time as possible, the reading of the minutes was dispensed with. A communication from the Chamber of Commerce relative to the renewal of membership for the society was read. The society decided that said membership be renewed.

Under heading of new business, Dr. Swanberg suggested that the society have a three or four day post-graduate course every year—sort of a Medical Chau-tauqua.

On motion the president was instructed to appoint a committee to look into the matter.

Adjourned.

NOVEMBER MEETING

On November 8 at 8:40 P. M. the Adams County Medical Society was called to order by First Vice-President Dr. H. P. Beirne, the president being absent.

Meeting held at the Chamber of Commerce. Routine business transacted, and the attendance was good.

Scientific work was a talk on "Radium" by Dr. H. P. Beirne, who gave the history, the physics, the limitations of radium, and also described the different rays. Several patients who had been treated or are being treated with radium were present, and served to make the program more interesting.

In the discussion that followed, Dr. Harold Swanberg, roentgenologist, spoke on the use of the x-ray as a treatment measure. Adjourned.

ELIZABETH B. BALL, Secretary.

CHICAGO MEDICAL SOCIETY REGULAR MEETING, NOVEMBER 3, 1920

1. The Value of the New Knowledge of the Vestibular Apparatus in Intra-Cranial Localization—Frank J. Novak, Jr.

Discussion—Frank Brawley, Lewis J. Pollock, and Joseph C. Beck.

2. Diseases of the Esophagus—Wm. Lerche, St. Paul, Minn.

REGULAR MEETING, NOVEMBER 10, 1920

1. The Therapy of Catarrhal Fevers—Bernard Fantus.

2. Local Anesthesia in Subtotal Thyroidectomy—John W. Nuzum.

3. Defects in Present Methods of Attempts to Control Venereal Diseases — Suggestions — Albert E. Mowry.

JOINT MEETING CHICAGO MEDICAL AND CHICAGO PEDIATRIC SOCIETIES

NOVEMBER 17, 1920

1. The Pathology of Tuberculosis in Children—Richard S. Austin.

2. The Physical Development of Tuberculous Children—Maurice M. Blatt.

Discussion opened by May Michael.

3. The Symptoms and Treatment of Latent Tuberculosis in Children—A. Levinson.

Discussion opened by Max Biesenthal.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

MEETING OF MARCH 1, 1920—Concluded

Dr. Samuel Salinger read a paper on "Primary Periostitis of the Mastoid."

ABSTRACT

The essayist explained his title as applying to infections of the cortical periosteum, occurring independently of any disease of the tympanic cavity or mastoid bone proper. They usually are due to trauma or exposure to cold (a number of other causes are also cited from the literature) and come on rather abruptly with severe local and mild constitutional symptoms. Frequently the infection enters by way of the cartilago-osseous junction of the external auditory canal, and the post auricular swelling may then extend into the osseous meatus, obscuring a view of the drumhead and making the differential diagnosis from mastoiditis difficult, especially if a previous history of otitis media is not definite. Another type, of which two cases were cited, comes on more gradually and develops into a subperiosteal abscess with milder local symptoms than the former. The diagnosis is important with reference to the prognosis, as these cases yield promptly to simple incision and are much less serious than secondary periostitis of tympanic or mastoid origin, which they so frequently simulate. Early incision, even though fluctuation be not present, is indicated to prevent erosion of the bone or extension of the inflammation into the external auditory canal or into the tissues of the neck.

DISCUSSION

Dr. Otto T. Freer thought that Dr. Salinger's valuable paper would attract attention to the differential diagnosis of external mastoid abscess and mastoiditis, so preventing needless mastoidectomies. He advocated a slender, cylindrical, not conical, ear speculum only one-eighth of an inch in bore, in order to get a view of the membrana tympani, in spite of the swollen meatal walls in these cases. A conical speculum wedges into the swollen skin of the meatus and cannot pass beyond the swelling. To see through so small a speculum, however, a Kirstein light is needed, the headmirror will not serve the purpose. While Kirstein headlamps are at present not obtainable, Sharp and Smith intend their manufacture in the near future and will have them ready by July 1st at the latest.

Dr. Eugene R. Lewis (Dubuque, Iowa), stated that he had a very interesting case in December, following a septal resection in a boy of seventeen, who was in very poor physical condition, and the resection was followed by an acute otitis media. Between Christmas and New Years he attended some party. The next day the ear discharge ceased abruptly and within twenty-four hours he had a tremendous swelling of the mastoid, apparently a mastoid abscess. The boy had quite a lot of pain and it was a typical looking case, with a swelling of the posterior wall. The patient was kept in bed and observed under tentative treatment for five days, but the only result was further dissemination of the swelling. X-ray plates showed intercellular partitions rather clearly. He

told the father of the boy that it was a somewhat atypical case and he did not think it was a mastoid abscess, although it was suggestive of that condition. He had enlarged the perforations the first day, but could not get any discharge except a little muco-purulent material which soon ceased. He suggested making a posterior opening for inspection; if it was a periostitis they could save the mastoid, and if not, simple mastoid drainage could be done. This was done under local anesthesia. They denuded the periosteum very widely, looking for periosteal pus or signs of cortical change, which they did not find. They went into the neck for two or three inches and opened up as wide as they could, so as to get free drainage. The wound closed in three weeks and there was no discharge from the middle ear after the fifth day. He did not know what the cause of the trouble was, but evidently acute extension of the infection caused some interference with the circulation.

Dr. Salinger (closing) said there were some points in connection with these swellings that could be cleared up. He thought there was a field for investigation in reference to the lymphatic supply, which he believed had something to do with the swellings. He did not know why these things would puff up, and when incised, promptly subside. This had been reported a number of times in cases of enormous swellings with pain and edema that recovered after being simply incised and sewed up, but the etiology was not known. The point he wished to make was that with a swelling over the mastoid and a swelling above the meatus, it was only natural to suspect a mastoid infection; yet without a history of previous discharge one might be at a loss. He had not been able to push aside the swelling in the meatus with a funnel (as suggested by Dr. Freer), because of the great pain. He knew that Dr. Freer was a great enthusiast about the Kirstein light and agreed that it was a valuable adjunct in the examinations.

CHICAGO OPHTHALMOLOGICAL SOCIETY

A regular meeting was held March 15, 1920, with the President, Dr. Alfred N. Murray, in the Chair.

SOME INDICATIONS FOR EVISCERATION

Dr. G. W. Mahoney read a paper on this subject. In the first few years of practice in special work, wherever he found it necessary to remove an eye, he did an enucleation in nearly every case, and in many cases with considerable deformity and in children with lack of development of the side of the face from which the eye was removed. He soon gave up this practice in many cases and later in many more. In panophthalmitis with a septic distended eyeball and acute pain he felt evisceration was the operation indicated, and not drainage or enucleation.

In staphyloma of the cornea following ulcer serpens, with a markedly protruding cornea which the patient was unable to cover or moisten with the conjunctiva eyelids, there was frequently breaking down in the center and giving a very unsightly and troublesome eye, hence evisceration was indicated. In absolute glaucoma with recurring exacerbations of inflammation and pain, he always did an evisceration. In kerato globus he had never been forced to the extreme of removing the eyes where both were involved, but he had where one eye was enormously distended, in which the distention increased month by month, the sclera becoming more and more thinned, pain increasing, deformity more apparent and the sclera in danger of rupturing, he had done an evisceration.

If a patient came with a perforating wound of the

eyeball involving the ciliary body, the treatment was perfectly clear, it would make no difference whether the patient had vision in the eye or not, that eye should be removed, for he stood in the greatest danger of some day developing sympathetic ophthalmia, as the essayist had often seen, and this might be very soon and without warning, the practice of carefully dressing the penetrating wound and covering it with a conjunctival flap, he was sure was poor surgery. The wound would heal, it was true, unless infected at the time of the injury, and the eye would quiet down, although it might be weeks in doing so, but the patient was in constant danger of sympathetic ophthalmia any time after ten days to two weeks from the date of the injury.

In the five classes of cases mentioned where removal of the eye was necessary, he always did an evisceration. The technic for the operation was described.

The author thought there should be no hesitancy in choosing between enucleation and evisceration in children, for certainly in children, when the entire globe is removed, the side of the face from which the eye had been removed did not develop as well as the opposite side, and the deformity increased as time went on.

ENUCLEATION AND ITS SUBSTITUTIONS CONSIDERED FROM A COSMETIC STANDPOINT

Dr. Harry J. Woodruff of Joliet, Illinois, stated that a person was entitled to lose as little as possible from the standpoint of personal appearance when they lost an eye. The question of deformity was not always a secondary one. There were some patients, women perhaps, who looked upon the loss of an eyeball as a terrible catastrophe, from the standpoint of their personal appearance, and they would be willing to do almost anything to have that operation performed in such a way that no one would be able to detect the deformity. He had in mind just such an instance of a woman of middle age who had a sarcoma of the choroid, and naturally enucleation was urged. She delayed for quite a while simply because, as she expressed it, she would rather die than suffer the deformity, but she finally consented, and the eye was enucleated in the ordinary manner. Unfortunately she did have a considerable deformity. She had as good an artificial eye as he was able to get for her in Chicago, and notwithstanding that she had so much depression of the upper lid that she wept over her personal appearance.

However, he thought in this case he would try the injection of the paraffin using Beck's syringe, and solid paraffin. He did with most happy results. He made two injections. In the first injection the quantity was not sufficient, but after putting in enough paraffin it filled out the ball so that with the Snellen eye she had a very much improved appearance. He has done a number of these cases since with equally good results.

Before the Snellen eye came into common use, he had experience with the Mules' operation, and also

the operation of Frost, where glass balls were introduced into Tenon's capsule. The original operation of Mules' of implantation of a glass ball into the scleral cavity, is successful, gave a beautiful result. The only objection to it was the fact that the operation must be an evisceration, and the general opinion seemed to be that evisceration was not entirely free from danger as far as sympathetic ophthalmia was concerned at least, not to the extent that an enucleation was. There were very few oculists who would do an evisceration unless it was a necessity because of panophthalmitis or of injury where enucleation would be quite difficult. He thought that this general opinion was the correct one because notwithstanding the argument that sympathetic ophthalmia followed evisceration more frequently because he was not thoroughly done and uveal tissue was left in there, still the fact that it was left in or might be left in there, was certainly an argument against evisceration. He supposed that this was the reason why Frost and Lang abandoned Mules' operation and attempted to fill out the cavity after an enucleation by implanting a glass ball in the capsule of Tenon.

Another objection to both of these operations was the fact that the glass balls were extruded in many cases, in his experience. However, the glass ball remained in place in some of his cases, while in many they came out.

He had had experience with the implantation of fat, both from the gluteal region and from the abdomen. He attempted once to implant fat from the abdomen with the skin surface outward. The idea was to have a skin surface take the place of the cornea being sutured to the conjunctival edges, but the skin sloughed in his case and the fat also. He hardly knew whether all came out or sloughed away or not, but he did know the convalescence of the patient was so delayed that it did not seem to him was worth while.

It seemed to him, that the proper and safe method to give the best cosmetic result was to perform enucleation, unless it was in a case where evisceration was necessary, suturing the muscles and capsule and conjunctiva together, and then, if one could get the co-operation of the artificial eye maker or dealer and get a good fitting eye, one could usually get a satisfactory result, unless it was in a person who was very thin who had little or no orbital fat. But if one had that unsightly sinking in the upper lid, then the method of injecting paraffin beneath the conjunctiva was used.

PLASTIC CORRECTIONS IN SLIGHT ECTROPION TO RETAIN GLASS EYE

Dr. E. F. Snyder said there were two things he would like to speak about. One was for teaching purposes how easy it was to take an ordinary wooden ball and demonstrate a plastic operation. By taking a wooden ball, using a few tacks, using a little chamois or leather to demonstrate almost any plastic operation around the eyelids.

The other thing he called attention to was a slight ectropion where we sometimes had a little difficulty

in using a prosthesis. We had a plentiful supply for slight deformities of plastic skin on the upper lid. If there was slight ectropion on the lower lid, as in a burn or injury, where it was necessary to take out the eye, and this slight burn prevented the glass eye from fitting, by undermining the skin of the upper lid, by going in with a keratome on the outer angle, making a slight circular incision which he demonstrated, by dissecting adhesions in the lower lid and making a circular flap, one got plastic skin in the upper lid. When the skin was brought up into the lower lid the double purpose was served of getting ample plastic to supply the other lid and an orbicularis muscular effect in holding up the lower lid.

By going in at the border of the upper lid, cutting off the layers at the outer border, undermining the skin of the upper lid, making a slight circular flap, following the lines of the orbicularis, one could get all the plastic skin needed to correct the defect and hold it in place, because the natural line of cicatrization extended up against the pressure of the ectropion which was downward.

In a case of slight burns he was able to pull up the ectropion and not have the slightest deformity; the tongue-shaped flap helped the lower lid up and kept it up.

DISCUSSION.

Dr. George F. Suker could not agree with Dr. Mahoney in regard to evisceration. He would not do an evisceration under any consideration whatsoever. If an eye had to be sacrificed, then an enucleation should be done. This sclera, in an evisceration lost a large share of its blood supply, and because of this, frequently underwent degeneration with calcification. Such a scleral cup would then act as a foreign body and an irritable stump ensued, which must ultimately be removed. Such scleral cups often caused sympathetic irritation.

In 1898 de Schweinitz collected about a hundred cases of eviscerations and implantations of foreign bodies into Tenon's capsule or scleral cup and reported not one authentic case of sympathetic ophthalmia arising from the implantations. In quite a large number of cases sympathetic irritation had arisen from a simple evisceration, several cases of sympathetic ophthalmia had followed from Mules' operation. When one had to sacrifice an eye, sacrifice it in toto.

In the majority of enucleations the upper lid drooped because of the destruction of the sympathetic nerve supply coming from the lenticular ganglion which was often destroyed, but ought not to be destroyed. Following the severance of the sympathetic fibers to the upper lid a sympathetic ptosis resulted, one of the symptoms of Horner's symptom-complex.

There was one foreign substance which could be retained in the orbit and not be affected by the body juices, and that was lead free glass. Any other metal, be it gold, silver or platinum would be affected because the human body did manufacture hydrochloric acid, but it did not produce any acid that could affect lead free glass or silicon. A hollow glass ball (18 to 23 mm. in diameter) implanted into the capsule of Tenon and with the preservation of the lenticular ganglion, gave an ideal result, both as to fullness of socket and range of motility of shell. The sphere was never extruded after the stitches had been removed, provided no infection had been introduced and the sphere was of the proper size. A too large a sphere would cause tension on the sutures and they might give and allow the sphere to be cast out. Should this occur, repeat the operation under local anesthesia using a smaller sphere. The implantation of fat into Tenon's capsule was nice procedure and yielded a good result, but care must be exercised not to insert fat that had been crushed. Again, should fat necrosis occur, as it sometimes did, then it caused a long delay in healing and the end result a

shade better than a simple enucleation. As to paraffin, whether inserted as a sphere or injected when fluid into the prepared and sutured cavity, it would often disintegrate, disappear or cause a paraffinoma. In implantations of any kind sufficient covering for the object implanted, was an essential. The cone of the muscle should be brought over the sphere with a purse string catgut suture and then suture the conjunctiva over this. There was no doubt then but that it would be retained permanently. He had made many of these operations and up-to-date had not had any patients come back with the ball extruded and some cases were operated on fully twenty years ago. He had had to take them out when implanted into the scleral cup because of an irritable stump or so-called sympathetic irritation.

Every operation about the face had two purposes: First, therapeutic, and second cosmetic. There was no necessity in doing simple enucleations on patients whether man or woman or child when one could do an implantation as an enucleation certainly justified the same. Sinking in of the upper lid was at a minimum with the preservation of the lenticular ganglion. After an enucleation in children, the bony orbit was not appreciably retarded in its growth. The apparent difference was due to the shrinkage of the orbital contents, and this shrinking was immeasurably counteracted by an implantation of any sort. Post-mortem measurements, years after the enucleation of children's eyes amply verified this statement.

He agreed with Dr. Woodruff that an evisceration might be performed when we had no other choice ourselves. The injection of paraffin sometime subsequent to operation, was not a good surgical procedure, as any building up or filling out of the orbit could be done at the primary operation of enucleation.

The implantation of a glass sphere embedded in a layer of fat was the ideal implantation as it gave much more of a cushion for the shell to ride on. Implant this into the muscle cone, bringing the latter together with pursestring suture and then the conjunctiva over this stump. As to size of sphere to be used, usually one about three-fourths to four-fifths of the size of the eye enucleated was chosen—one ranging from 18-22 mm. in diameter.

The enucleation for an intraocular sarcoma was not a contraindication for an implantation. However, a careful inspection of the resected portion of optic nerve for any metastases was obligatory. Should such exist, then certainly an implantation was not justified. He had several patients who were still living, whose eyes were enucleated for intraocular sarcoma and in whom an implantation was made some fifteen years ago. There had been no recurrence up-to-date.

The only objection to these various operations of implantations was that they took considerable time before healing took place; however, the difference in time was no valid objection. For several years past, he had been using an ordinary tonsil snare to sever the optic nerve after the globe was freed of its muscle attachments. The hemorrhage was practically nil and this was of advantage as the subsequent reaction, edema and infiltration, was much less. Relatively speaking, he had very little edema to contend with after implantation. He said that if it were his misfortune to have an eye sacrificed, for any condition whatsoever, he would want an enucleation with an implantation into Tenon's capsule.

Dr. William E. Gamble, said he should dislike to see the society go on record as throwing overboard evisceration. He asked Dr. Suker what he would do in cases of panophthalmitis.

Dr. Suker replied that he had not had any cases of panophthalmitis, but if he did he would do straight enucleation.

Dr. Gamble believed that was poor surgery. He thought the life of the patient would be endangered.

It had been his experience that in cases where one had panophthalmitis, the other eye did not become involved. It was only in the slow, the chronic uveitis cases that one bad involvement of the other eye, so that in cases of panophthalmitis the danger of opening up the sinus at the back of the eye and the very little danger of sympathetic disease made it, as he saw it, good surgery to eviscerate and poor surgery to enucleate.

Dr. Michael Glodenburg said that in cases of panophthalmitis he would neither eviscerate or enucleate. Panophthalmitis was nothing more or less than an abscess of the eyeball, hence the only surgical treatment indicated in an abscess was incision and drainage. Surgeons no longer cut out or curetted an abscess cavity in any other part of the body. It would seem to him that it would be contraindicated here more so than anywhere else. The impossibility of eviscerating and removing every vestige of choroid was apparent to every one. The opening of the many channels of exit in the acute stage, e. g. the venae vorticosae, the anterior ciliary veins, etc., was always a dangerous procedure. So far no one could tell if infection was or was not going to follow. In enucleation the same held true but probably more so. The danger of sympathetic ophthalmia and meningitis must be remembered. The only surgical treatment indicated, in his opinion, was wide incision of the cornea and that within the limbus so as not to open the canal of Schlemm. Keep this incision open wide to obtain free drainage, then after all the inflammatory symptoms had subsided and the wound had healed wait three or four weeks and then enucleate. Evisceration he was inclined to think, in panophthalmitis was a procedure of yesterday. He had seen such cases followed by serious results. He hoped Dr. Woodruff had had better luck than others in injecting paraffin. Very recently he had seen a case of paraffinoma of the face following injection of paraffin for a deformity of the nose. It would seem that paraffin for no particular reason at times had the perverse habit of spreading all over the face like a Medusa. Personally, he was afraid of it. In regard to implantation he had never tried it. He had seen a number of failures following this procedure in the hands of capable men. In his service the old classic operation was done and uniformly fairly good results were obtained.

Dr. Harry S. Grable agreed with Dr. Mahoney and disagreed with Dr. Suker. He believed absolutely in evisceration of the eyeball except in intraocular tumor, which was an absolute contraindication to evisceration. The results of evisceration were so far superior to the results of enucleation, cosmetically speaking, that there was no comparison.

He was not particularly anxious to eviscerate in the type of iridocyclitis that might lead to sympathetic ophthalmia because he was not sure of the evisceration. But the absolute removal of all of the intrascleral contents was as a sure preventive against sympathetic ophthalmia as was enucleation.

He agreed with Dr. Gamble that evisceration in panophthalmitis was preferable to enucleation, but he agreed with him on a different basis than that of the danger of purulent meningitis. He agreed with him because he thought a better cosmetic result was obtained. If one would go back over the literature he would find there had been a few cases of meningitis following enucleation. The first case was reported by Von Graefe, but there was no autopsy. There had been eight autopsies of cases of meningitis occurring after enucleation, and in not one of these cases was there any continuity of the infectious process in any of the structures of the orbit. In other words, it would not have made any difference whether enucleation or evisceration had been performed, a metastatic meningitis would have occurred just the same.

For implantation he preferred fat. It was an autogenous substance that molded itself to the contour of the sclera or muscle cone. It was pliable. Its growth or nutrition could go on until the vessels could come in. It was a live implant. It became readily vascularized and maintained its vitality. It must not be implanted in the presence of an acute infection, such as panophthalmitis because it would be extended every time. In any other condition fat might be implanted after evisceration or enucleation.

Dr. Frank Brawley, in support of those who had advocated evisceration, called attention to the work that had been done by Dimitry, of New Orleans, who had done eviscerations of various sorts for something like twenty years. His present operation, so far as he knew, gave the best stump that had ever been obtained. Briefly, he (Dimitry) dissected the conjunctiva as far as the equator and then it was sutured in that position. This left quite a large area of sclera exposed. He

then made his incision, took off the cornea, including two or three millimeters of the sclera, and did evisceration. When he had stopped bleeding fairly well, he picked up the optic nerve and removed with Grafe knife a disc of sclera surrounding the optic nerve, which was then pulled up, and a portion of the nerve cut off. He used a gold ball which was implanted, and silk sutures were placed in the scleral wound in front. Removal of the nerve was not always necessary, but this operative gave him the drainage that was essential to retention of the gold ball.

Dr. Robert Von Der Heydt stated that three years after operation it did not make much difference whether evisceration or enucleation had been done as the scleral tissue was practically gone after that time. Because of doing an evisceration he would not be afraid of sympathetic inflammation in the other eye. He used a large fenestrated scoop, such as the ear men used, for curetting the contents of the eye, removing all uveal tissue. He did like to see a free hemorrhage in removing the eye. It was nature's self-cleanser and had saved many a wound from infection and could be controlled by hot bichlorid at any time.

Dr. E. F. Snyder said he had done many fat implants in the last five years, and he had had good results in some cases and indifferent ones in others. The fat implant principle was very much the same as the Lanebone plating principle, if you got infection the fat was of low resistance, and you lost it easily. One had to do an absolutely immaculate operation, and had to put the fat in with absolutely no crushing and no handling. If one got it in right, as a plastic substance the orbit could be filled up beautifully. While some of it was absorbed, all of it was not. His failures in fat implants were due to low grade infections, and since following an improved technic he had had better results. He took the fat from the buttocks. He painted them with tincture of iodine, making an incision until the fat gaped, and took plenty of it. He did not touch it with his fingers but with instruments only. He had two assistants, one who retracted the wounds in the buttocks, the other retracted the capsule of Tenon so he did not handle the fat. In other words, nothing came in contact with the fat. The fat did not go through any handling after the primary cut from the buttocks, and he took more than he seemed to need because he expected a certain amount of absorption of the fat. This fat implant would fill out the orbit beautifully and a certain amount of it would be retained so that a large socket could be obtained.

In eyes in which there was or had been gonorrheal ophthalmia, he had seen some of them with slough of the cornea after this condition and a chronic process was set up after the acute process had subsided. In such cases he had been afraid of enucleation and had always eviscerated. He had had three such cases that he could remember, and there he thought evisceration was a far safer procedure in that it did not lead to any ill results, and he was certainly afraid of opening a communication with the meninges where an acute or chronic gonorrheal affair was present.

Dr. E. V. L. Brown said that evisceration did not remove the choroideal tissue extending along the vortex veins in their course through the sclera and a good many cases of sympathetic inflammation had followed evisceration. He took issue with Dr. Snyder's statement that sympathetic inflammation was not to be feared in the perforating gonorrheal ulcers of the cornea. He reported such a case in the Archives of Ophthalmology in 1906. The defect in Descemet's membrane was really small in these cases and Fuchs contended small atria rather than large ones were found in sympathetic inflammation.

Dr. A. A. Hayden felt that it was well for us to remember even in enucleation done apparently early, when no inflammatory signs were present, occasionally a sympathetic inflammation in the opposite eye developed. This was true in a case that Dr. Gamble and he saw that nine years ago which was presented to the society. Dr. E. V. L. Brown examined and sectioned the eye. This young boy had a penetrating wound of the sclera, and on the ninth day after the injury enucleation was advised. This was done on the eleventh day with dessection of one-quarter of an inch of the optic nerve. Healing was without event, but on the twelfth day, if he remembered

correctly, sympathetic inflammation developed in the second eye with the loss of that eye. If he understood Dr. Suker correctly, he said that sympathetic inflammation did not develop after a well performed enucleation. He submitted this case, which was reported some years ago, as one in point.

Dr. Mahoney, in closing the discussion, said there were two or three points he would like to speak about, one of which was concerning thoroughness in the clearing out of the scleral cavity. He could see no reason why, where there was a wide open sclerotic cup, it could not be cleaned thoroughly if we took the time to do it. We then had the very best stump possible and it was not necessary to implant anything foreign to take its place.

He recalled a case that he saw of a man a few years ago who worked in the stockyards. He had sustained a frightful injury to one eye. The eye was enucleated the same afternoon, he thought about two and a half or three hours after the injury. He saw the man some four or five years later; he was totally blind in the other eye and had been for two or three years. He had every indication of having had sympathetic ophthalmia in the other eye. The speaker had never had a case of sympathetic ophthalmia in his practice and he had done evisceration in the class of cases he had mentioned for twenty-five years.

There was one other point he would like to speak about, and it was this: Atrophy or degeneration of the sclerotic. Within the last month he had a patient come to him whose eye was removed forty-two years ago by a very well known oculist in Dublin. This man had worn a shell eye all these years, occasionally removed it at night, but not often and the cavity kept gradually filling in with hypertrophied tissue until he could not wear an eye. He came to him to see if he could do something for him to restore the cavity so he could again wear an artificial eye. He attempted to do that; he dissected out a large amount of tissue and implanted some Thiersch grafts. When he went deep into the cavity he came upon the sclerotic; it was white and firm and of ordinary thickness and looked perfectly normal as a fresh sclerotic would today. He removed a piece for examination. While this case did not prove anything, still this man carried the sclerotic of the eviscerated eye for forty-two years without any change whatever. He was sure evisceration was the operation to do in the classes of cases he mentioned; it gave the best result.

Dr. Harry Woodruff stated that if one had ever attempted enucleation in purulent panophthalmitis with terrific swelling of the eyelids and orbital tissues, he could speak from bitter experience. He had been taught to eviscerate such an eye and through reading just such a discussion as we were having now he finally came to the conclusion he should enucleate and not eviscerate. So the next case that presented itself of panophthalmitis, one of those terrific cases, he enucleated the eye, and it was one of the most humiliating experiences he ever had. It was an exceedingly difficult operation; he made up his mind he would perform evisceration in such cases and not attempt to enucleate, since sympathetic ophthalmic was not apt to follow a purulent process. It was not the purulent inflammation that caused disaster; it was another kind. It might be associated with the pus process. These eyes were injured in which there was no pus present, but there was a different sort of inflammation—a proliferative uveitis. These were the dangerous eyes and one would be perfectly justified in not eviscerating such an eye. Dr. Suker was very definite and positive in his ideas as to what to do in these cases, but he had not been able in all these years to get others to take up this idea of his. He (Dr. Woodruff) attempted to get lead-free glass, but he did not know whether he got it or not. The glass did not stay in in many cases, although it did in others. The idea of fat implantation was better because fat was autogenous; it was a natural tissue of the body, and fat made the eye more prominent, so that if one could place an implant of fat in there and have it remain, it was the most natural sort of substitute for the eye; but for old cases where the atrophy of the orbital tissue was great, the injection of solid paraffin was safe and satisfactory.

FILARIA LOTA

Dr. William E. Gamble exhibited a specimen of filaria lota, and gave the following abstract of the literature on the subject.

The adult filaria lota has much of the appearance of a bit of catgut or violin string. In general the male is smaller and more slender than the female. The posterior end of the male is hooked or coiled and provided with spicules that project from the anal orifice.

Life History. The embryos are discharged from time to time into the connective tissue of the host. They ultimately make their way into the blood stream and are carried in it about the body. Their further development depends on being drawn into the stomach of some suitable blood sucking ecto parasite that attacks the host. In the body of this second host the larvae develop or undergo changes and are introduced into the first host when the ecto parasite bites again. The intermediary in the filaria lota is not proven but the mangrove flies is suggested by Manson. This worm whose antics in the eye are so well known through descriptions of many observers, especially Argyll Robertson, was reported first from the West Indies and adjacent coast of South America. All the early cases were negroes, and probably brought from Africa. In Africa it is very common in certain localities, and in certain territories all natives and most Europeans are infected.

Locality. It can occur in any part of the body especially in subcutaneous tissue. In the eye it may be subconjunctival. It has been removed from the anterior chamber by Mercier, Bachelor and LeCompte. No record of it in lens or vitreous chamber. It has been seen and removed from the lids, and has been seen to wander back into the orbit passing out of view into the loose connective tissue.

The French physician Lota after his stay in Africa, and on his return to France, had oft recurring conjunctivitis. He had numerous attacks of stinging pain when he noticed one day a yellow irregular mass beneath the conjunctiva, a sensation as a foreign body lasted a couple of hours and then disappeared. In the evening the same symptoms, and the physician noted it moved from the temporal aspect of the bulbar connection and he watched it creep along under the conjunctiva into the inner canthus where it disappeared. Many interesting cases of the filaria have been described and many agents have been used to destroy them but with little effect.

SIDEROSIS BULBI

Dr. E. K. Findlay reported the case of a man, 39 years of age; occupation, structural iron worker. He came to the clinic March 9, 1920 on account of the failure in vision of the left eye. He gave no history of any particular injury or any previous inflammation. In November, 1919, he noticed a change in the color of the left eye, and spots began to appear before the eye. Vision failed rapidly this last month, until now he had only light perception. Examination showed a pronounced yellow color of the left iris, while the

right was a clear blue. The pupil reacted to light and accommodation and when the pupil was dilated concentric brown pigment deposits could be seen on the lens, which was entirely opaque. An x-ray showed a foreign body in the vitreous chamber behind the equator.

DISCUSSION.

Dr. Clark W. Hawley said the case reported by Dr. Findlay was interesting from the standpoint of one he had about twenty-five years ago, although the result was not so serious. He did work at that time for the Chicago Shipbuilding Company. This man was hit over the eye with a flying bolt; he went to his work the next day after a surgeon had sewed up the wound. There was no injury apparently to the eye. He had no trouble for over a year. He was sent to him then to have his pupil reduced. All of a sudden the pupil dilated quite extensively. He examined the eye and in the posterior portion saw a white mass in which there was a small piece of steel, evidently sterile. It had been encapsulated. However, there was considerable irritation set up, and he had a dilated pupil. He removed the piece of steel with the result of 20/20 vision.

He also reported the case of a man, who two or three weeks ago in handling some iron in some way was struck in the eye. He came to the speaker with a slight irritation of the conjunctiva. On careful examination he could find no entrance of the piece of steel into the eye whatever. He suggested to him an antiseptic wash and hot water and he applied it. The eye promptly cleared up for a day or two, and he came back with a mild iritis. Immediately he put the eye under atropin and the pupil dilated on the inner side. On the outer side it did not dilate at all. At the sclero-corneal junction he saw a little black streak which looked very much as though the iris was being pulled away from its junction with the sclera. The iritis promptly subsided, and he told the man undoubtedly there was a piece of steel in the eye. He would not have an x-ray picture taken at first, but later on one was made, and a piece of steel located at the junction of the iris with the ciliary body. Whether that black spot he saw was a piece of steel or not it was impossible for him to determine. The eye had quieted down. The tension was somewhat reduced on account of some slight exudate from the ciliary region. I had hoped to show this man but he absolutely refused to have anything done. He said he was going to take his chances and leave the piece of steel there. The speaker imagined it would be rather dangerous to the eye, but cases were known where the piece of steel might be perfectly aseptic and become encapsulated like the one he had. The one he had would not have had irritation if the encapsulated piece of steel had not been split in this way.

Dr. Hawley reported the case of a woman, 35 or 40 years of age, who ever since childbirth had two largely dilated pupils without any pupillary reaction whatever. About three weeks ago all of a sudden the left pupil contracted. She had now a perfectly normal pupil in the left eye and with ordinary reaction of the iris. She came to him wishing that he might dilate that pupil so that it would resume its original condition and position because she was afraid something was wrong. He told her to go home and pray, or to use Christian Science, that then the other pupil might do the same thing. He would not be surprised at all at the end of a few months to find that her right pupil would be the same as the left and that she would have two normal pupils.

SIDEROSIS BULBI

Dr. William A. Mann reported briefly two cases similar to those that had been reported. The first case came to him for treatment of iritis, the patient having been under treatment for that condition. He found there was marked siderosis of the iris. He advised an x-ray, which was taken, and found a small foreign body just below the lens and apparently in

front of it. The lens itself was not injured. Application of the magnet finally succeeded in pulling it out from below. The iris was stretched across the anterior chamber, but finally pulled loose. When it was removed with corneal section he used a small magnet to extract the foreign body, and the man recovered fairly good vision.

The second case was interesting because the man came to him and said, "My wife says my eyes do not look right." There was marked siderosis and a dilated pupil. He asked the man if he had been using any drops or had received any injury, and he stated that about four months ago he got a piece of steel in the eye and the foreman took it out. He told him that it looked to him as if there was a piece of steel in the eye, although he could not find the point of entrance, but down low on the iris there was a black spot. The pupil contracted under eserine, but did not show anything more. An x-ray was made and it showed a piece of steel in the same position as in the other case, below the lens at the root of the iris and in front of the lens, and he suggested that the magnet be used. The patient was taken to the hospital, the giant magnet applied, and at first there was no response, but by repeated applications of the full current it finally began to show a little bulging. Finally it was removed by the magnet. There was no congestion following the operation. Vision was 20/20, and two or three weeks afterward the pupil was down almost to normal. Paralysis of the sphincter was something new to him. There was no iritis, no inflammation, and hence this was rather unusual in his experience.

DISCUSSION.

Dr. S. Luther McCreight stated that during the past four years he had seen thirteen cases of siderosis, and in only two of them would the pupil react. Vierhoff had pointed out that in these cases of siderosis bulbi there was a deposit of some nature in the sphincter muscle. There had been a good deal of controversy as to why these pupils did not react. Many of these cases had inflammation. From a pathologic standpoint, there was a great deal to be done yet in regard to these cases. Certainly, in all the cases he had seen the pupils were immobile. All but two of the cases he saw had inflammation. He thought probably the nature of the foreign body had something to do with it. He thought it had been pretty well proven that if one put sterile glass in the vitreous one got a sterile abscess. There was a deposit about the foreign body.

Dr. Michael Goldenburg reported the case of a man, who received an injury to his eye about two years ago to which he paid little or no attention until very recently when he noticed that his vision in the eye was failing. After dilatation of the pupil with a mydriatic, he found a cataractous lens with typical siderosis spots all around the anterior surface of the periphery of the lens. Radiographs located a piece of metal 1x2 mm. in diameter back of the equator and in the vitreous. After the usual preparation the giant magnet was applied, but the patient did not experience any pain or pull on the make or break of the current. He was a little skeptical at first as to the presence or kind of metal present, but then decided to make a triangular flap incision through the sclera for direct attack. After accomplishing this, he inserted a small curved end piece with a hand magnet and removed the piece of metal without any further difficulty.

Dr. Findlay asked Dr. Goldenburg how long the piece of steel was in the eye.

Dr. Goldenburg replied two years.

(To be continued)

ST. CLAIR COUNTY OUR NOVEMBER MEETING

The regular monthly meeting of the St. Clair County Medical Society was held in the Chamber of Commerce Rooms, Murphy Building, East St. Louis, Illinois, November 11, 1920, 8:00 P. M., with fifteen officers and members present.

Mr. Bottom appeared before the society and explained the working of the Physicians' and Surgeons' Telephone Exchange.

The society indorsed the establishment of an exchanged in East St. Louis.

Dr. A. M. Aszmann was elected to membership.

Committee on Clinics reported and asked for further time.

Moved by Dr. Foulon, Seconded by Dr. Wiggins that a committee be appointed to ascertain as to the number of patients attending clinics in St. Louis and to formulate a plan as to the best way that the society could organize and control local clinics.

Dr. Wiggins introduced the following resolution:

Resolved, That the East St. Louis branch of the St. Clair County Medical Society hold a special meeting on the 22nd of November, at which time they shall consider the question of expulsion of members who have not attended the last four meetings, on account of their being a detriment to Progressive Medicine.

Moved and seconded that resolution be adopted.

Moved by Dr. Wiggins, seconded by Dr. Arbuckle, that invitation be extended to the Belleville branch to attend the special meeting on November 22nd.

The scientific program was postponed until next meeting.

No further business appearing, the society adjourned.

WALTER WILHELMJ, Secretary.

Personals

Dr. Julia Holmes Smith has returned to Oak Park after several months spent in California.

Dr. David O'Shea is house physician at the new Hotel Somerset at Sheridan Road and Argyle street, Chicago.

Dr. Chas. P. Colby of Mt. Carmel had a miraculous escape when his auto was crushed by an Alton freight train recently.

Dr. I. G. Hubbard has resumed practice in Ohlman after spending the summer in the Northwestern states.

Dr. Harriet B. Ward of Berkeley, Cal., has recently visited friends in Elgin, where she was in practice before going to California.

Dr. D. A. K. Steele addressed the students at Champaign, November 10, on the "Genesis of a Great Medical College."

Dr. F. E. Tulley, formerly of Granite City, has transferred his membership from our society to the Los Angeles Medical Society.

Dr. Wm. Arthur Clark, after ten months as one of the consultants in orthopedic surgery at the Mayo Clinic, has located in Pasadena, Cal., with practice limited to orthopedic surgery.

Dr. and Mrs. R. D. Luster, of Granite City, spent six weeks on a vacation trip to Denver and Colorado Springs. They went by automobile and covered 2,800 miles.

Dr. E. W. Zook, who has been in the state hospital service in Illinois for several years, has been transferred from the Jacksonville State Hospital to the Peoria State Hospital.

The honorary degree of Doctor of Science was conferred on Dr. Henry Baldwin Ward, professor of zoology at the University of Illinois, by the University of Cincinnati on the occasion of the centennial anniversary of its medical college.

In connection with the centennial celebration of the founding of the Medical College of the University of Cincinnati, the honorary degree of Doctor of Laws was conferred on Dr. Ludvig Hektoen, and the degree of Doctor of Science on Drs. Dean D. Lewis and Edward Oakes Jordan.

At the meeting of the Association of the American Medical Milk Commission held at Louisville, Ky., Nov. 15, 1920, Dr. J. Warren VanDerslice of Oak Park, Ill., was elected president and Dr. R. R. Ferguson of Chicago was elected secretary-treasurer of the Association for the coming year.

News Notes

NEW OFFICERS OF THE TRI-STATE DISTRICT MEDICAL SOCIETY

Honorary President of Clinics—Dr. George W. Crile, Cleveland, O.

Honorary President—Dr. James R. Guthrie, Dubuque, Iowa.

President—Dr. George V. I. Brown, Milwaukee, Wis.

President-elect—Dr. John E. O'Keefe, Waterloo, Iowa.

Vice-President, Wisconsin—Dr. Joseph S. Evans, Madison.

Vice-President, Iowa—Dr. Walter L. Biering, Des Moines.

Vice-President, Illinois—Dr. Edwin P. Sloan, Bloomington.

Managing Director—Dr. William B. Peck, Freeport, Ill.

Secretary-Treasurer—Dr. Domer G. Smith, Freeport, Ill.

BOARD OF DIRECTORS

Dr. John Van Reed Lyman, Eau Claire, Wis.

Dr. Wilson Cunningham, Platteville, Wis.

Dr. Arthur G. Sullivan, Madison, Wis.

Dr. Donald McCrae, Jr., Council Bluffs, Ia.

Dr. John F. Herrick, Ottumwa, Ia.

Dr. Henry G. Langworthy, Dubuque, Ia.

Dr. Edward Fiegenbaum, Edwardsville, Ill.

Dr. Clifford U. Collins, Peoria, Ill.

Dr. James McDonald, Anrora, Ill.

PROGRAM COMMITTEE

Dr. Horace M. Brown, Milwaukee, Wis.

Dr. Don Deal, Springfield, Ill.

Dr. Tom B. Trockmorton, Des Moines, Ia.

—Excavation for the Victory Memorial Hospital at Waukegan has been started.

—Radium to the value of \$13,000 is said to have been thrown into a toilet bowl by a patient in Utica who thought it was "too hot." The radium was recovered from the sewer.

—The increase in cases at the Cook County Hospital has impelled the opening of the new wing of the Municipal Contagious Diseases Hospital.

—Construction work has been begun on the University of Illinois Medical School and Hospital, which is to occupy a site of 10 acres which has been the National League Baseball Park, and is in the vicinity of Cook County Hospital.

—At a meeting held recently in Hotel Sherman for the purpose of standardizing the practice of medicine and surgery, the Chicago Society of Industrial Medicine and Surgery was organized. Dr. Clarence W. Hopkins, Evanston, was elected president.

—The meeting of the Elgin Physicians Club, November 8, was enlivened by the presentation by Dr. J. F. Bell of a portrait of President-elect Harding to Dr. J. G. Schneider, an ardent Democrat. It was in retaliation for a portrait of President Wilson "wished on" Dr. Bell four years ago.

—The great demand for X-Ray and Physio-Therapy equipment has made it necessary for the McIntosh Battery & Optical Co., now at 217 N. Desplaines St., Chicago, one of the oldest firms in this line, to erect a new building to provide for the unusual growth of the business.

—The Chicago Gynecological Society offers an annual prize of \$100 for the best paper presented during the year. Nonmembers as well as members are eligible for the competition which will be limited to those authors who have announced their intention to compete. Those interested should communicate with the secretary, Dr. Joseph L. Baer, 104 South Michigan Avenue.

—At the meeting of the Central Illinois Medical Association in Pana last month the following officers were elected: President, Dr. H. E. Monroe of Shelbyville; vice-president, Dr. A. L. Morrison, Decatur; treasurer, Dr. L. L. Morey, Vandalia; secretary, Dr. F. A. Martin, Pana; censors, Drs. J. W. Patterson, Oconee; G. E. Bullington, Nokomis, and G. N. Kreider, Springfield.

—The Health and Sanitation Exposition held at the Coliseum in Chicago, November 24 to 29, was a pronounced success, both in the completeness and excellence of its varied features and in the enormous crowds that taxed the capacity of the building. Probably no "Health Show" has ever demonstrated in an equal degree the interest the public feels in matters affecting the health of the individual and the community.

—At the meeting of the Southern Illinois Medical Association held in Carbondale last month, the following officers were elected: President, Dr. C. E. Eisele of East St. Louis; First vice-president, Dr. H. C. Moss of Carbondale; Second vice-president, Dr. Heber Robarts of Belleville; Secretary-treasurer, Dr. A. B. Capel of Shawneetown; Assistant Secretary-treasurer, Dr. C. W. Lilley of East St. Louis. The 1921 meeting of the association will be held in Belleville.

—It is reported that through activities of the Department of Registration and Education the following convictions were obtained: Karl J. Hawkins, a chiropractor at Bluffs, fined \$35; Lucius J. Love of Danville and Peter Walker of Chicago, chiropractors; Yin Joe Lee, Chicago,

fined \$25 and costs; Mrs. F. Zientarske, Chicago, a nurse, fined \$25 and costs; Willie Greer of East St. Louis, fined \$100 and costs—all for practicing medicine without a license. The license of Earl C. Rice, licensed among "other practitioners," was revoked for unprofessional conduct.

—The National Research Council has established a Research Information Service as a general clearing house and informational bureau for scientific and industrial research. This "Service" on request supplies information concerning research problems, progress, laboratories, equipment, methods, publications, personnel, funds, etc. Ordinarily, inquiries are answered without charge. When this is impossible because of unusual difficulty in securing information, the inquirer is notified and supplied with an estimate of cost. Much of the information assembled by this bureau is published promptly in the *Bulletin* or the *Reprint and Circular Series* of the National Research Council, but the purpose is to maintain complete up-to-date files in the general office of the Council. Requests for information should be addressed, Research Information Service, National Research Council, 1701 Massachusetts Avenue, Washington, D. C.

Marriages

ARTHUR HERMAN FAHRNER, Joliet, Ill., to Miss Agnes Coulehan of Austin, Ill., October 16.

SAMUEL J. GINSBURG to Miss Yetta Weiss, both of Chicago, recently.

JOHN RILEY MERRIMAN, Springfield, Ill., to Miss Dorothy Carroll of New York, October 27.

HAROLD ALFRED RAMSER to Miss Mildred E. Jackson, both of Chicago, October 16.

MAURICE P. SEIDNER to Miss Bertha Reisman, both of Chicago, recently.

FRANK WALLS YOUNG, Chicago, to Miss Ruth Rendleman of Cairo, Ill., October 16.

Deaths

JAMES B. STETSON, Sheffield, Ill.; Rush Medical College, 1870; aged 75; also a druggist; died September 18.

EDWIN W. COOK, Rock Island, Ill.; State University of Iowa, Iowa City, 1884; aged 63; a Fellow, A. M. A.; died October 14.

BENJAMIN FRANK HOCKMAN, Sumner, Ill.; Medical College of Ohio, Cincinnati, 1893; aged 55; died October 8.

KARL HERMAN SCHMIDT, Chicago; Northwestern University Medical School, 1911; aged 31; a Fellow, A. M. A.; died October 30, from pneumonia.

CHARLES IVES, Pecatonica, Ill.; Chicago Medical College, 1888; aged 58; a member of the Illinois State Medical Society; died October 11, from cerebral hemorrhage.

JOHN DEXTER ANDREW, Chicago and Evanston, Ill.; Chicago Medical College, 1878; aged 66; for forty-three years assistant chief surgeon of the Chicago and Northwestern Railway; died November 6, from myocarditis.

RICHARD H. LULL, Evanston, Ill.; Rush Medical College, 1883; aged 60; assistant chief surgeon of the Chicago, Milwaukee and St. Paul Railroad; died November 11, from angina pectoris.

ISAAC M. MARTIN, La Harpe, Ill.; Hahnemann Medical College and Hospital, Chicago; aged 67; editor and founder of the *Quill*; died suddenly, October 18.

CHARLES C. MILLER, Marengo, Ill.; University of Michigan, Ann Arbor, 1856; aged 89; a well-known apiarist, editor, and author of several books on bee culture; died about September 7.

EDMUND CALVIN PARK, Manning, S. C. (license, Illinois, 1877); aged 83; for nearly half a century a medical practitioner of Flora, Ill.; died at the home of his daughter in Manning, October 8.

HERMAN JOHN HALVORSEN, Chicago; Chicago College of Medicine and Surgery, 1912; aged 33; a Fellow, A. M. A.; Lieutenant, M. C., U. S. Army, and discharged Jan. 4, 1919; died October 21, from acute endocarditis.

WILLIAM HAROLD STUTSMAN, Chicago; Rush Medical College, 1915; aged 34; a member of the Illinois State Medical Society; Captain, M. C., U. S. Army, and discharged June 13, 1919; died in Seattle, Wash., September 22.

WILLIAM D. CARTER, Nashville, Ill.; Rush Medical College, 1862; Chicago Medical College, 1866; aged 83; a member of the Illinois State Medical Society; assistant surgeon of the Forty-Fourth Volunteer Infantry during the Civil War; died October 27, from pneumonia.

THOMAS J. WHITTEN, Peoria, Ill.; Jefferson Medical College, 1867; aged 76; a member of the Illinois State Medical Society; a veteran of the Civil War; for 40 years a medical practitioner in Montgomery County and the past 13 years in Peoria; died October 31, from appendicitis.

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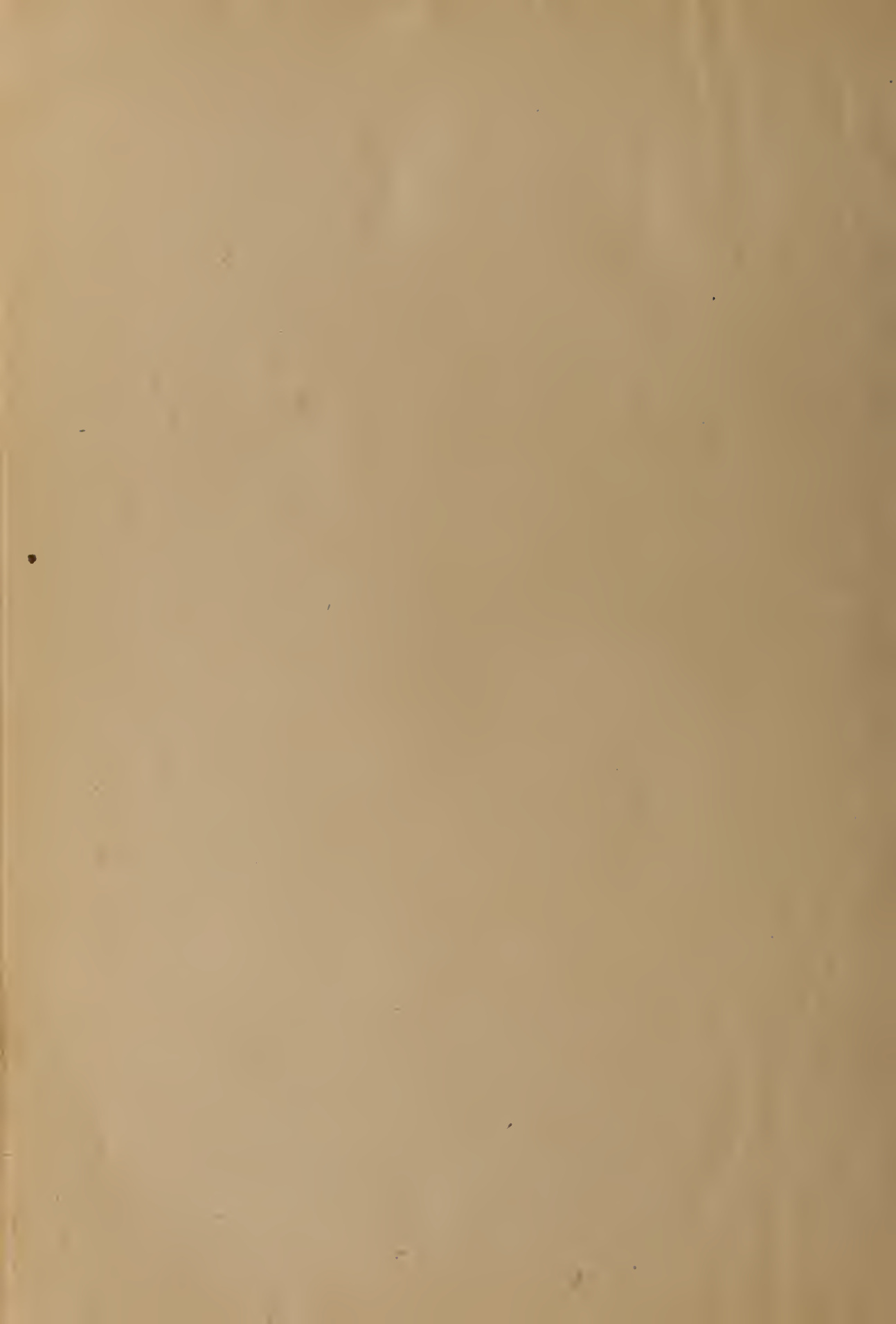
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